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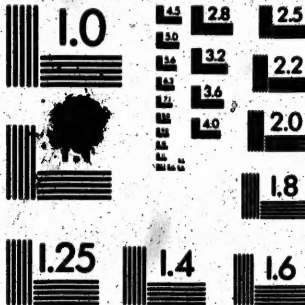
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SMITH'S FAMILY PHYSICIAN.

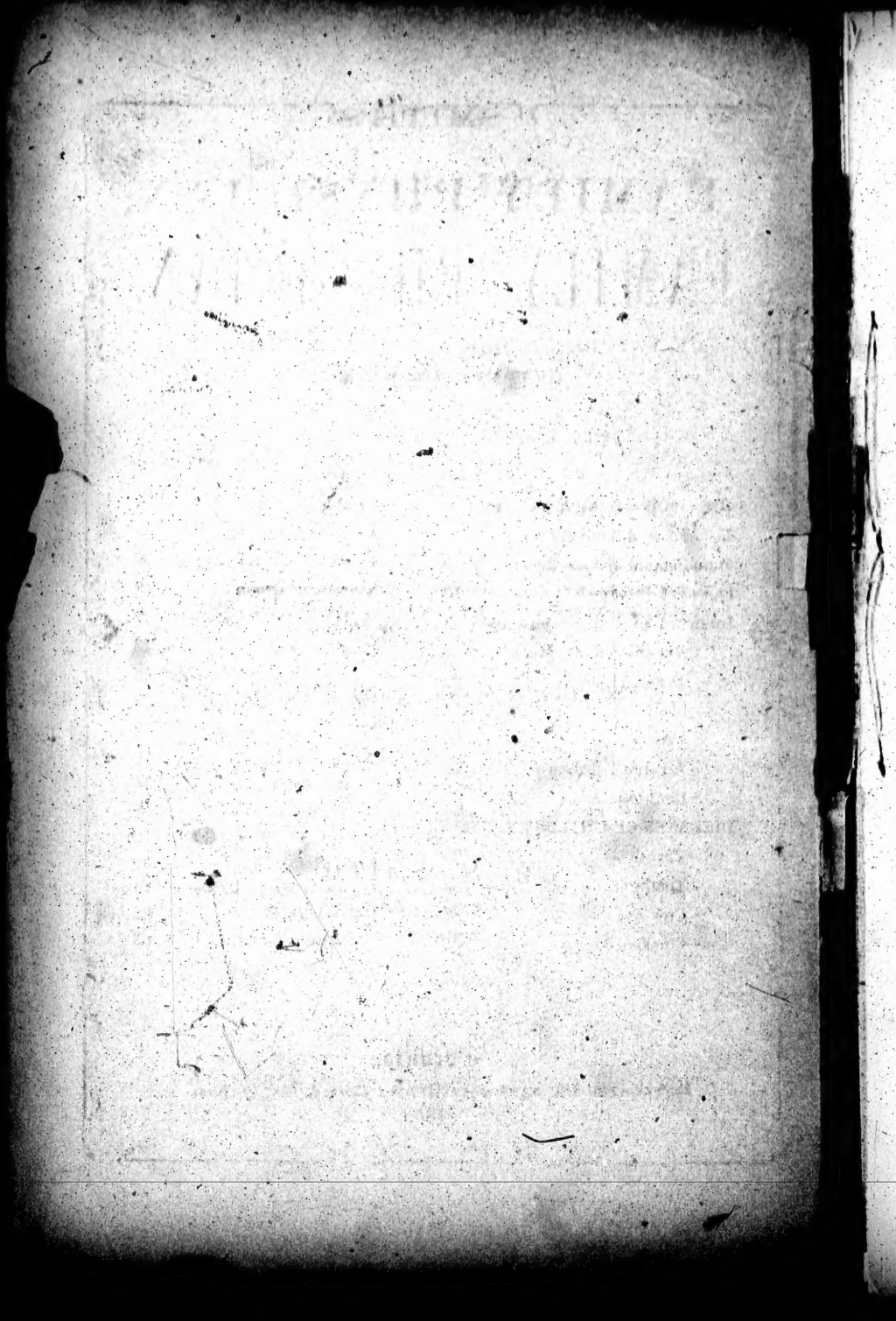
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Toronto:

PRINTED BY HUNTER, ROSE & CO., 86 KING STREET WEST.

1869.



SMITH'S
FAMILY PHYSICIAN;

COMPRISING

THE NATURE, CAUSES, SYMPTOMS, AND TREATMENT
OF DISEASES;

WITH INSTRUCTIONS FOR NURSING THE SICK;

LIST OF POISONS: ANIMAL, VEGETABLE AND MINERAL;

WITH SYMPTOMS OF POISONING, AND THE BEST REMEDIES AND TREATMENT;
COPIOUS TABLES OF PRESCRIPTIONS; [EXPLANATIONS OF SCIENTIFIC TERMS,
&c., &c., &c., COMPILED FROM THE LATEST AND BEST AUTHORITIES,
ENGLISH, AMERICAN AND FOREIGN;

VERIFIED BY MANY YEARS' EXPERIENCE.

BY

W. H. SMITH,

AUTHOR OF "CANADA: PAST, PRESENT AND FUTURE," ETC.

Toronto:

PRINTED FOR THE AUTHOR BY HUNTER ROSE & Co., 86 KING ST.
1869.

ENTERED, according to the Act of the Parliament of Canada, in the year One
Thousand Eight Hundred and Sixty-nine, by WILLIAM HENRY SMITH, in the
Office of the Minister of Agriculture.

PREFACE.

"Mens sana in corpore sano."

In preparing a new work as a "guide to health," I have been influenced mainly by the conviction that such a work was very much required. Having travelled considerably during the last two years, and mixed much with the agricultural population, I have been concerned to see that in a large proportion of cases, the health of the inhabitants was not what it should be. Some of this deficiency may doubtless be ascribed to the vicissitudes of climate; some to hardships necessarily attendant on the labours and privations of first settlers; but still more to a careless neglect of those "rules of health," attention to pure air, cleanliness, exercise and food, that are absolutely necessary if we would enjoy life. Some of this arises from ignorance, some from carelessness, and some from *stinginess*. Many men will allow disease to accumulate in their families for months, depending occasionally upon quack medicines, rather than send for a medical man. In many cases the medical man does not live conveniently, and they grudge the expense of the visits. Of course, in a thinly settled country, like Canada, a professional man has a much smaller community to make a living out of, than if he lived in an old, thickly settled country. If a physician has to live on a population of five hundred families, of course his charges must be higher than if his practice comprised a community of five thousand; that is, if he is to live at all. Another thing, in Canada, few persons have more than a moderate income, and there is, as yet, no class that can afford to pay medical men such remuneration as will enable them to do a great deal of work for nothing, as is the case with medical men in England. When Lady Anne Coke (wife of the celebrated "Coke of Holkam," afterwards Earl of Leicester,) was confined with her first child, the surgeon who attended her received a fee of five hundred pounds sterling, (\$2,500.) The late Sir Astley Cooper

received one year in fees thirty-three thousand pounds sterling, and I believe the late Sir Henry Hallford has received as much, while hundreds realize incomes ranging from 2000 to 5000 pounds sterling. Of course, under such circumstances, a professional man can afford to devote, and many do, a considerable time to gratuitous attendance on the sick.

"A little knowledge is a dangerous thing," was a maxim of the great Dr. Samuel Johnson; and certainly we occasionally see the truth of the adage exemplified by people who, knowing a little and thinking they know more than they do, act upon their knowledge either to their own or their neighbour's injury. Not long since a dentist having occasion to plug some teeth for a farmer, found one of them so sensitive that he considered it necessary to insert a small quantity of morphia into the tooth, to deaden it before introducing the filling. "I suppose," remarked the patient, "there's morphia enough in that bottle to kill a man." "Yes," was the reply, "enough to kill *ten* men." The farmer, speaking of the matter afterwards said, "enough morphia was put *in his tooth*, if he had swallowed it, to *kill ten men*." A few weeks afterwards the same dentist had to fill some teeth for a young woman living at an adjoining farm. One of these was also sensitive, and morphia, (about a sixth of a grain,) was inserted. Some time after the dentist left, the morphia swallowed by the patient began to make her sleepy. The family she was living with, having heard the neighbour's story, of the "quantity enough to kill ten men," immediately concluded that the girl was poisoned, and that, "if they let her go to sleep, she'd never wake again." Therefore, the first thing they did was to make her swallow some mustard, by way of emetic; and then they kept her awake all night. Of course the girl was tired and sleepy, and they had considerable difficulty in keeping her awake, but the greater the difficulty the more they persevered. Twenty-four hours after the morphia was taken they sent for a young medical practitioner in the neighbourhood, who, having to ride three or four miles, of course "*must do something*," so he clapped a blister on the back of her neck. Now the girl could not by any possibility have swallowed more than the eighth or the tenth of a grain of morphia, and as she was grown up, strong and healthy, beyond making her sleepy, it could have had no injurious effect; and yet here was the poor girl, first vomited, then kept awake all night, and finally blistered, when a good nap of two or three hours, in the first place, would have set everything to rights.

In compiling this work, I have drawn upon all the best authorities, adding thereto my own experience. I have endeavoured to clothe everything, as far as possible, in plain language. The various prescriptions given are those that have stood the test of experience ; but I need scarcely remind my readers that the efficacy of medicines depends a great deal on their quality and purity.

A copious index will be attached to the work, and a sufficient glossary of scientific terms, with explanations of their meaning.

A FEW HINTS TO THE READER.

In making up, or in getting made up, *prescriptions ordered in this book, recollect that the good effects thereof must depend, in the first place, upon the quality of the drugs, and secondly, upon their being prepared in a proper manner. When Mixtures are ordered, containing infusions—that is, substances infused in boiling water, (as tea is made),—the articles to be used must be the pure drug itself, not any *powder*, which, if not actually adulterated, will probably have been made of an inferior quality of root or bark. For instance: Gentian Root must be the root *sliced*. Cascarilla bark or Peruvian bark or any other bark ordered, must be the bark *bruised* in a mortar, not the *powder*. In making infusions, the water must be *boiling hot* when poured over the ingredients, and the jug must be covered over with a cloth, and set by the fire or on the stove, (but not so as to continue boiling), for a couple of hours, and then strained through a piece of fine muslin; then bottled, and kept well corked. When *simple syrup* is ordered, which is generally to improve the taste of the medicine, the same quantity of lump sugar will answer the purpose. When brandy is ordered to be added to any mixture, and the *very best* cannot be obtained, it is better to substitute *half* the quantity of alcohol. Little of the brandy brought to this country being as pure as alcohol, if of proper strength, must necessarily be. When sugar is added to an infusion it may be mixed with the ingredients before the water is poured on them, but all other additions, such as alcohol, brandy, spirit of Ammonia, or any other such substances are not to be added till after the infusion is strained off. Bottles containing spirituous liquids, or other volatile matter, should always be kept well corked.

Pills are usually made of three or five grains weight, but if any of the pills ordered are too large for the patient to swallow comfortably, they may be divided, and he may take two instead of one. Some people cannot take *large pills*.

Every family accustomed to making up medicine at home, should have a pair of "Apothecaries' Scales and Weights," and a graduated glass measure. The cost is but trifling and much greater accuracy is obtained in weighing and measuring, and that in cases where accuracy is of importance.

Any preparation in which copper is used, as, for instance, pills made with *Sulphate of Copper*, must be mixed up with a wooden or ivory knife, or, in a Wedgewood mortar, as the contact of *Iron* or *Steel* would decompose the Sulphate, and cause the Copper to leave the substance it was combined with, and attach itself to the Iron or Steel.

A valuable collection of prescriptions will be given in the course of the work, and it is to be hoped that proper precautions will be used in getting them prepared.

SMITH'S FAMILY PHYSICIAN.

USEFUL MEDICINES TO KEEP IN THE HOUSE.

I think it advisable to furnish the subscribers to this work with a list of such preparations as every family should keep in the house; they may be obtained from any respectable druggist, at small cost. These preparations will often be useful when a medical man is called in, as he may not happen to have with him such medicines as he may wish to give. Medicinal preparations should be kept in bottles, in a dry and moderately cool place, and kept well corked, so as to exclude the air. The preparations given below are numbered, and when any reference is made to them in the body of the work, the *number* of the preparation will be given.

The Carminative may be given at any time to young infants, whenever they suffer from griping in the bowels, which some children very frequently do. The Cathartic mixture (No. 2) is intended for children under five years old, and the dose may be *five* grains or a small teaspoonful for each year of the child's age. The Cathartic powder (No. 3) is intended for all over five years, and the dose may be *one* grain for each year of the age.

CARMINATIVE.

Carbonate of Magnesia.....	One Dram.
Tincture of Assafoetida.....	Two Drams.
Tincture of Castor.....	Two Drams.
Syrup of Poppies.....	Half an Ounce.
Essence of Peppermint.....	One Dram.
Essence of Carraway.....	One Dram.
Water.....	Three Ounces.—Mix

well together. From five to ten drops for *each year* of the child's age may be given for a dose.

CATHARTIC, NO. 2.

Powdered Rhubarb.....	Two Drams.
Carbonate of Magnesia.....	Half an Ounce.
Powdered Ginger.....	One Dram.—Mix to

gether.

CATHARTIC, NO. 3.

Powdered Jalap.....	Two Drams.
Powdered Rhubarb.....	One Dram.
Oil of Carraway.....	Ten Drops.—Mix.

CATHARTIC PILLS, NO. 4.

Socotrine Aloes.....	Two Drams.
Powdered Jalap.....	One Dram.
Castile Soap.....	One Dram.
Oil of Cloves.....	Fifteen Drops.
Oil of Carraway.....	Fifteen Drops.—Mix
and beat well together. Half this may be divided into 24 pills, and the other half into 48 pills. One, two, three or four for a dose.	

CATHARTIC AND TONIC PILLS, NO. 5.

Socotrine Aloes.....	One Dram.
Extract of Gentian.....	One Dram.
Castile Soap.....	One Dram.
Oil of Carraway.....	Thirty Drops.—Mix
—divide into 60 pills. Two, three or four for a dose.	

SEDATIVE PILLS, NO. 6.

Extract of Poppies.....	Forty Grains.
Extract of Hyoscyamus.....	Forty Grains.—Mix,
and divide into 24 pills. Two or three to be taken at bedtime.	

ASTRINGENT MIXTURE, NO. 7.

Prepared Chalk.....	Two Drams.
Powdered Gum Arabic.....	Two Drams.
Laudanum.....	Sixty Drops.
Syrup.....	Half an Ounce.
Cinnamon Water.....	Half a Pint.—One or
two table spoonfuls for a dose.	

ASTRINGENT MIXTURE, NO. 8.

Prepared Chalk.....	Two Drams.
Powdered Gum Arabic.....	Two Drams.
Tincture of Catechu.....	Half an Ounce.
Aromatic Confection.....	Two Drams.—Water
sufficient to make half a pint. One or two tablespoonfuls for a dose.	

In chronic Diarrhoea much benefit will be found from chewing Strawberry leaves. Those leaves that are *full grown*, but not too old, should be gathered. They should be used several times a day. They may also

be bruised, and an infusion or tea made from them. A quantity may be gathered when they are in perfection, and dried for future use.

FEVER MIXTURE NO. 9.

Carbonate of Potash.....Two Drams.
Citric Acid.....Dram and a half.
Tincture of Hyoscyamus.....One Dram.
Syrup.....Two Drams.—Water
sufficient to make half a pint. One or two table spoonfuls to be taken
every three or four hours.

COUGH MIXTURE, NO. 10.

Extract of Poppies or Hyoscyamus.....One Dram.
Antimonial Wine.....Three Drams.
Ipecacuanha Wine.....Two Drams.
Oxymel of Squills.....One Ounce.—Water
to make half a Pint. A table spoonful for a dose. (*Several more Cough
Mixtures will be given in the Appendix.*)

A very good Cough Mixture for children may be made by covering a new-laid egg with Lemon juice; let it stand till the shell is dissolved, then add two table spoonfuls of Honey, and stir it up till completely mixed. Two table spoonfuls of water may be added, with half an ounce of Ipecacuanha Wine or Paragoric. One or two tea spoonfuls for a dose.

TONIC MIXTURE, NO. 11.

Gentian Root, sliced.....One Ounce.
Hops.....One Ounce.
Bitter Orange Peel.....Half an Ounce.
Cloves, bruised.....A Quarter of an Ounce.
Loaf Sugar.....Two Ounces.
Boiling Water.....Two Pints.—Let it stand by
the fire for two hours, then strain, and add a quarter of a pint of good
Brandy. A table spoonful for a dose, three times a day.

The following articles should also be kept in the house.

A Bottle of Antimonial Wine.
A Box of Spermaceti Ointment.
Some Sticking Plaister, commonly called *strapping*.

Many people are fond of hunting over the bush or the fields for barks, roots or herbs. When I hear of any one doing so it always reminds me of the late Mr. Justice Haliburton's remark of the Nova Scotians, that "they would spend three or four hours in trying to catch a horse, to ride a distance that they could walk in half an hour." So, some people will spend several hours in the bush, hunting a Slippery Elm tree, that they may make mucilage of the bark, while in half an

hour, and at a cost of a penny or two, they could obtain all the Flax Seed they wanted at the village store. It is high time we became a little more *civilised*. Besides, it is only at certain seasons of the year that plants or portions of plants possess their full virtues. Roots should be dug up in Winter, or very late in the Fall, after the plant has died down; Leaves should be gathered when they are full-grown; and when the whole of a plant is used, it should be cut just when the plant comes into blossom. For want of attention to these things, many spend their time uselessly. Many years ago, Canada drove a large and lucrative trade with China in the root of a plant called "Ginseng." It was a valuable trade to the Province, but some people, too anxious to get rich, dug up the roots at wrong seasons of the year, and by thus sending a poor quality of root to China, destroyed the market; as, after a time, the Chinese, having been cheated in the quality of the root, would not buy any Ginseng that came from Canada.

ON THE MANAGEMENT OF THE SICK-ROOM.

"*Nursing is half the battle.*" No truer remark than this, regarding the treatment of the sick, was ever uttered. Vain are the care and attention of the physician, wasted his knowledge and skill, if his exertions are not seconded by the unremitting and *sensible* management of the nurse.

How often is a physician, on being summoned to a patient, struck with loathing and disgust at the smell of the room; and this, not by any means the necessary result of a want of means to order things otherwise, but the consequence of ignorance of the laws of health, carelessness, or a natural fondness for dirt.

One of the chief requisites in the sick-room is *plenty of fresh air*, without this, no patient—no matter what may be the disease, or what the season of the year—has "half a chance." In summer, the windows of the bedroom should be kept open; and, in winter, the fire should be made in an open grate, if possible; but, if this is not possible, and it is necessary to have a stove, the door thereof should be kept constantly open, with a fender in front to prevent the sparks from flying out, and the door of the room should be kept open, so as to cause a draught.

If the patient is confined to bed, both the sheets and the body linen should—if possible—be changed every day. Any little fatigue the patient may experience in the operation will be amply compensated for by the intense feeling of comfort from the change. At the same time, the bed should be shaken up, and the feet of the patient should be washed in warm water, and wiped thoroughly dry afterwards. If the weather is at all damp, a fire should be lighted in the room early in the morning, to dry the air, and get rid of any unpleasant vapours that may have accumulated during the night. Many people have a habit of burning a candle or lamp all night in a sick-room, but this is not a good practice, and the gases given out by the burning material very soon spoil the atmosphere of the room; it is better to put the lamp or candle *outside* the door of the room, unless the room should possess an open

fire-place, when the lamp may be placed therein. When a light is kept in a room, it should always be *shaded*, so that the patient may not see the light; as many persons are very apt to be kept awake by a light in the bedroom.

All slops, excrementitious matter, and every thing else calculated to make unpleasant smells, should be removed as quickly as possible from the bedroom, and from the house. Some people are terribly careless on this point; they have *no noses*.

The matter of *diet* requires great attention. Sick people have very frequently very delicate and very capricious appetites. They take a fancy to a thing, and, if they could have it quickly, would greatly relish it, but if they have to wait an hour or two, the inclination evaporates, and when it is ready, the desire for it is gone. Again; many people have no judgment, and will present a sick person with a mess, "fit," according to the old expression, "for a plough-boy." The very sight of such a *quantity* destroys the appetite, while a small portion of the same would have been taken and enjoyed.

Great attention should be paid to the instructions of the attending medical man, as more may depend upon a strict regard to his directions than the nurse or attendant may have any idea of; for instance, the physician may wish to put the patient under the influence of an *alkali*, and may prohibit *acids* of any description. The nurse, or mother, or attendant, to gratify the patient, may give her pickles or lemonade, or some other sour thing that may completely *neutralize* the effect of the medicine; and, knowing they have done wrong, they will generally conceal the truth from the medical attendant. Again, sick people very seldom fancy *greasy* things, and attention should be paid to skimming the fat off soups or broth before offering them to a patient. Many people do not understand the difference between *grease* and *gravy*; they will call the pure grease that runs out of fat pork when frying *gravy*, whereas it is nothing but *grease*.

When cooling drinks are ordered for a patient, the nurse should see that they are really *cool*; as a very small quantity of *cold* liquid will quench thirst, and abate fever much better than a much larger quantity rendered warm and insipid by long standing in a room.

The room should be sprinkled occasionally, particularly when a patient has an infectious disease, with a solution of *chloride of soda* or *chloride of lime*, taking care not to throw the solution over any coloured articles, as both of these solutions have the power to remove most colours. *Camphor water* is very refreshing, and the smell is liked by most persons. When the patient or her friends can afford it, *lavender water* may be used to sprinkle the room and the bed-clothes. It is the *most refreshing* of all perfumes, and its smell is usually very grateful to the senses of the sick.

The sick-room should be kept *quiet*. Many people, sometimes out of mistaken notions of kindness, are constantly intruding on sick people, and that, too, on people for whom they do not care one jot, but not knowing how sufficiently to kill their own time, they frequently accomplish that object by half killing some unfortunate (with whom perhaps

they have no acquaintance) whom they worry with their visits. In making these remarks, I do not allude to those friends of the patient (if she is fortunate enough to have such) whose kindly care and sympathy make them ever welcome, but to those *bored*, both male and female, who intrude themselves everywhere, till sometimes, by the close of the day, the patient has been visited, worried and wearied by half the chatter-boxes in the parish.

Most sick people are fond of flowers.

When a patient is attended by a *hired* nurse, the friends should be careful to see that the patient really receives whatever is ordered, particularly where wine and other nice things are ordered, to see that they are actually consumed by the patient, and not by the nurse. Many professional nurses are very kind, careful, and considerate, but human nature is weak, and I cannot allow any feeling of delicacy towards the good nurses to prevent me from giving this caution, as I have known the life of a patient sacrificed through the nurse herself drinking the wine which she should have given to her charge.

CAUSES OF DISEASE.

Health consists in a natural and proper condition and proportion in the functions and structures of the several parts of which the body is composed. The standard of health is not, however, the same in all individuals; that which may be health to one may be disease to another. Thus: the healthy pulse in adults averages from 70 to 80; yet there are some in whom 90 or 100 is a healthy pulse. Some persons fatten on a quantity of food on which others would starve. The animal functions, muscular strength and activity, nervous sensibility, and the sensorial powers, vary still more in different individuals, yet all within the limits of health.

Causes of disease are those circumstances which essentially precede it, and to the operation of which its occurrence is due. In many instances these circumstances elude our observation. In many others, the true cause, if apparent, is combined with other antecedent circumstances which have no share in producing the disease, and yet are liable to be mistaken for causes. These circumstances are to be sifted, and the true cause discovered, only by the attentive observation of large numbers of cases, in which disease is produced. Thus, it was long a matter of doubt whether the Itch could be engendered from filth, as well as from contagion; but, since microscopic investigation has discovered the existence of the Itch-mite, no doubt remains that this insect is the only essential cause of the disease.

The causes or circumstances inducing disease may be *intrinsic*, or existing within the body; or they may be *extrinsic*, having their origin without the body. Extrinsic causes are very numerous; comprising all the agencies which can act upon the body or mind, such as temperature, air, moisture, food, poisons, mechanical and chemical influences, sensual impressions, &c., &c.

But the common causes of disease are seldom of a decided and positive

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character; they are often present without disease ensuing, and they are known to be causes only because disease is observed to ensue in a greater number of cases when they are present than when they are absent. Thus, improper food is a cause of indigestion, and exposure to cold is a cause of catarrh; yet many persons eat unwholesome food without suffering from indigestion, and many are exposed to cold without taking cold. But those who do suffer from indigestion observe that they do so more after taking improper food; and those who are afflicted with catarrh can often trace it to exposure to cold. In some cases, however, where the predisposition to disease is sufficiently strong, it may, under certain circumstances, become in itself a sufficient cause of disease; thus, a person with a very weak stomach always has indigestion. So, likewise, exciting causes, if sufficiently strong, may produce disease without predisposition; thus, a person not predisposed to indigestion, may be pretty sure to get it, if he takes a sufficient quantity of fat, raw cucumber, or any such indigestible matter. Take another example. A healthy person, living in a marshy district, may not get Ague until he becomes debilitated from any cause, such as cold or fatigue; then the poison will act. But, without his being thus weakened, if the exciting cause be made stronger by his sleeping on the very marshy ground itself, then the poison may act without predisposition.

Predisposing causes of disease may be divided into:

DEBILITATING INFLUENCES,
EXCITEMENT,
PREVIOUS DISEASE,
PRESENT DISEASE,
HEREDITARY CONSTITUTION,
TEMPERAMENT,
AGE,
SEX,
OCCUPATION.

Debilitating causes of Predisposition are the most numerous of any; as we might expect from the fact that constitutional strength generally implies power of resisting disease.

These causes may be classed as *imperfect nourishment; impure air; excessive exertion of body or mind; want of exercise and sedentary habits generally; long continued heat; long continued cold; habitual intemperance with intoxicating liquors; depressing passions of the mind, such as fear, grief, and despondency.*

Many are the instances in which numbers, as well as individuals, have escaped a prevalent disease, until depressed by some unhappy event or apprehension, and then they have fallen victims. It is a common remark, that, when a contagious or epidemic disease prevails, those who take most precautions frequently suffer, because they are timid and fearful, whilst the stout-hearted and reckless escape. During the first Cholera in England, the Medical Officer of a Government Establishment, situated in a healthy part of the country, (himself an old Army Surgeon), had a terrible dread of getting Cholera; he made up his mind that if it came in

the neighborhood he should take it, and, if he took it he should die. He took every precaution in his power to preserve the health of his own immediate vicinity, but, at length, one day he got some fish that disagreed with him, made up his mind at once that he had got Cholera and should die; and he did die, although there was not another case within miles of the place.

*Excessive and repeated evacuations, either of the blood or of some secretion.
Previous debilitating diseases.*

EXCITEMENT.—Excitement in many cases, or rather over-excitement is apt to lead to mischief. Violent exertion makes the muscles or their fasciæ peculiarly liable to rheumatic inflammation from the subsequent action of cold and damp. Excessive indulgence in a stimulant diuretic beverage, such as punch, renders the kidneys liable to inflammation or congestion on exposure to cold.

PREVIOUS DISEASE.—There are many diseases by which a person is more liable to be attacked after having had them once. Thus, a child who has once had croup is very liable to a return. Convulsive disorders such as Chorea, Hysteria, and Epilepsy are extremely apt to recur; and the longer they have existed, the more difficult they are to remove, and the more ready they are to reappear on the application of any exciting cause. Rheumatism, Gout, Gravel, many cutaneous diseases, Dropsy, Jaundice, and many others are of this class.

DISEASE ALREADY EXISTING IN THE BODY.—For instance, tubercles and other tumours, structural lesions of the heart and other organs, often induce irritations or obstructions of bloodvessels, which, if not themselves causing open disease, render them ripe for disorder from other causes. Thus, a person on the occasion of violent bodily or vocal exertion, is seized with profuse spitting of blood, which causes his death; on opening the body many tubercles are found in the lungs, although there had been no obvious symptom of their existence before the violent effort.

HEREDITARY TENDENCY TO DISEASE.—It is well known that Scrofula, Gout, Rheumatism, Epilepsy, Mania, Asthma, Blindness and Deafness run in families. But every child does not necessarily contract the disease; many appear to be altogether exempt. Sometimes a whole generation is passed over and a disease appears in a third. A person will have gout, perhaps for the first time, when he is forty or fifty years of age. His son, if he lives very abstemiously, may possibly not have it at all, but, if he is a free liver, he will probably get it on attaining the same age.

TEMPERAMENT.—The *Sanguine Temperament* is accompanied with clear skin and rosy cheek, an excitable pulse, quick movements and lively disposition. This temperament gives a disposition to inflammation, determination of blood and active hemorrhage. The *Phlegmatic or Lymphatic Temperament* is the reverse of the Sanguine; it occurs in those with weak pulse and languid circulation, cold extremities and pale skin. The liability is to watery fluxes, dropsy and other chronic affections. The *Bilious or Melancholic Temperament* is commonly met with in persons of dark complexion and gloomy disposition. The *Nervous Temperament* predis-

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AGE.—Age may be divided into *Childhood*—or the age from infancy to puberty—*Puberty*, *Adult Age*, and *Old Age*. In childhood the functions most active are those which administer to growth; the organs of digestion and assimilation are therefore liable to disorder: hence children are liable to derangements of the stomach and bowels, worms, remittent fevers, &c.

At *Puberty* the child springs, as it were almost suddenly from childhood into manhood. The change, however, is more apparent in the female than in the male sex. At the approach and commencement of puberty the glandular system is extremely liable to congestions and inflammations, and it is about this age that so much mischief is done by undue muscular exertions and exposures to cold, damp and night air.

Adult Age can hardly be said to predispose to any diseases, unless it be those arising from particular modes of life. It is commonly a period of steadier health, because the functions are more evenly balanced; but, if the mode of life be unfavourable, bad habits are apt to become established, and by their continuance to induce disease. Thus gout, gravel, rheumatism, indigestion, and various other disorders, are apt to occur in middle life, because the predisposition to them is gradually engendered by some error, in diet or regimen, too slight to excite disease, but sufficient by accumulation to dispose to it, on the addition of an exciting cause.

As age advances such habits affect the organization, and accelerate those changes in the system, by which our existence is limited to a span of years. The changes which old age induces in the exterior of the body shows a failure of those functions which are active in youth. Instead of the muscles, fat and integuments being nourished in the equal proportions that give beauty as well as strength to the form in mature life, the muscles become thin and sinewy; fat becomes scanty, partial or in excess; the integuments are loose and wrinkled, or fat and flabby; the joints stiffen, and the gait loses its firmness and uprightness. Old age is thus attended with increasing infirmities and liabilities to disease. The very strength and activity that some functions retain, may, from their very partiality, endanger life, and their gradual and more equal failure degrades the physical and often the mental frame of man to a lower scale of existence, until he sinks into second childhood, dotage and imbecility.

SEX.—The male sex is remarkable for the higher development of the muscular system, with a corresponding strength of frame; for the stronger impulses of the animal passions, and for a greater endowment of the reasoning faculty. These respectively bring with them a liability to suffer from diseases of the muscles, limbs, joints, heart, and great vessels; from the evils contingent on undue indulgence of passion or appetite; and from disorders of the brain and its intellectual functions.

In the female sex, the predominant bodily functions are the nutritive and the sensitive; while the perceptive and instinctive faculties and moral emotions preponderate in the mind. Hence the greater proneness of females to changes in flesh and blood; to disordered sensation, spasms, convulsive and other affections of the spinal system; and to the direct

and indirect consequences of the indulgence or thwarting of instinctive and moral feelings.

OCCUPATION comprises many circumstances already noticed under the heads of predisposing influences. Thus sedentary occupations include want of exercise and sometimes impure air; laborious employments operate as excessive exertion; other occupations may predispose to disease by the continued exposure to heat or cold which they occasion. Some employments require constrained postures, which, if insufficient to induce, may yet promote the occurrence of disease; thus engravers and watchmakers are liable to affections of the head from holding the head low; shoemakers and tailors are subject to disorders of the stomach from their stooping forward at their work. In many other instances, occupations induce disease rather by exposing the individuals to the exciting causes, than by inducing a predisposition; but, the very circumstances, which in great intensity sufficed to excite disease, in a lower degree may only induce a disposition to derangement. Thus the slow introduction of lead into the system, occurring in the occupations of painting, plumbing, card-enamelling and printing, may not cause colic until cold or irregularity of diet becomes an additional or exciting cause. The same remarks will apply to dry-grinding, needle-pointing, leather dressing and other unhealthy occupations. An important element in the influence which employments have in causing disease, is the time during which they are pursued; thus, an occupation not in itself unhealthy, may become so when continued too many hours in the day; and a work which is attended with risk, may be often safely undertaken for short periods with a due amount of relaxation or diversion to another pursuit. By attention to this point, the injurious influences of occupations may be much lessened.

Amongst other causes of disease may be mentioned excessive use of intoxicating liquors and the consumption of adulterated and unwholesome food. The most disastrous consequences of intemperance are exhibited by the habitual drunkard, who, in proportion as he indulges in liquor, loses his appetite for food, and his power of digesting it. He then drinks and starves, and the disease which ensues comprises the exhaustion of inanition with the more direct effects of the alcoholic poison. Thus, in *delirium tremens*, the drunkard's disease, together with the permanent restless excitement of the irritated nervous system, which adds more and more to the exhaustion, the weakness of body and mind is fearful, and in bad cases affects even the organic functions, so that the pulse is very weak and frequent, the excretions scanty and depraved, and the respiration is too imperfectly performed by the involuntary powers to permit sleep to ensue. This exhaustion must soon terminate in death, unless prevented by appropriate treatment; and this must comprise, besides Opium (the common remedy), Ammonia and other stimulants to the circulation and respiration; purgatives and diuretics to free the blood from the excrementitious matter that has accumulated in it; and fluid nourishment to repair its waste. Without these adjuncts, Opium will not only fail to procure sleep, but its narcotic influence may extinguish the flame of life.

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adjuncts to food, when taken with careful moderation and discrimination, often prove beneficial by aiding the digestion when it is weak, and by counteracting various exhausting and depressing influences, which are frequently arising out of the artificial condition and employments of society, especially in large towns and cold climates. Total abstinence, therefore, is preferable to moderation, *only* because it is morally easier to practise, not because it is more salutary in its physical effects.

Alcohol may be obtained from any substance which contains *sugar*. All the different grains destined for the support of man; corn of every description; esculent roots, potatoes, carrots, turnips, beets; grass itself, as in Kamtschatka; apples, pears, cherries, peaches, and other fruits; and even from milk. The Tartars and Calmucks obtain a vinous spirit from the distillation of mare's and cow's milk. Liquids do not intoxicate altogether in proportion to the quantity of *spirit* they contain, nor is the effect upon the constitution, for good or for ill, dependent always upon the quantity, provided it is not excessive; for instance, Champagne intoxicates very quickly. Now, Champagne contains but a small portion comparatively of Alcohol, but this escapes from the froth, or bubbles of Carbonic Acid gas, as it reaches the surface, carrying with it all the fine flavour of the wine. Wines containing the same quantity of alcohol, therefore, differ in their effects; indeed it is not only to the alcohol they contain that the injurious effects of some wines are to be attributed, as Dr. Paris clearly shows that when they contain an excess of certain acids, a suppressed fermentation takes place in the stomach itself, which will cause flatulency and a great variety of unpleasant symptoms.

Disease may be excited by unwholesome articles with which the food is adulterated. To this class of causes belong various poisons. There are some noxious matters occasionally mixed with food, which gradually produce deleterious effects. Thus, salted provisions too long used will cause scurvy; ergotted corn has been known to produce dry gangrene. Lead gradually introduced causes constipation, colic, paralysis, and atrophy (wasting away). Impure water, used as drink, is a common cause of disease; containing decaying vegetable or animal matter, it may induce sickness, diarrhoea, cholera, and typhoid symptoms; hard waters, which are impregnated with some of the salts of lime, render the bowels costive, and are supposed to favour the production of calculous diseases and bronchocoele; brackish waters, containing saline matter, may induce dyspepsia and diarrhoea; chalybeates, containing iron, are constipating, &c.

Many articles of domestic consumption are sadly adulterated. In making bread at home, we use nothing but flour, water, yeast and salt. The bakers sometimes add potatoes, alum, magnesia and other substances, to give it a white appearance and impart lightness. Alum is largely used, not as an adulteration of itself, but for the purpose of enabling them to work up and whiten an inferior flour to mix with that of a better quality. Some of the adulterations of flour are made by the baker; others by the wholesale flour dealers. Some time ago a statement was published in the English papers, by a gentleman who, whenever he visited Newcastle-under-line, Staffordshire, was invariably seized with severe pains in the stomach; he suspected it was caused by the bread he had

eaten. This led to an inquiry, and the bread upon analysis, was found to contain Plaster of Paris. The baker declared his innocence; but, on searching the miller's premises from whence the flour was procured, a large quantity of this substance was found, which led to his being mulct of a considerable sum in the shape of a fine.

"A short time since," says a correspondent of a London periodical, "a friend of mine, a chemist in Manchester, was applied to for a quantity of French Chalk, a species of *talc*, in fine powder; the party who purchased it used regularly several pounds a week; not being an article of usual sale in such quantity, our friend became curious to know to what use it could be applied; on asking the wholesale dealer who supplied him, he stated his belief that it was used in facing Tea, (the last process of converting black tea into green), and that within the last month or two he had sold in Manchester upwards of a thousand pounds of it. Our friend, the chemist, then instituted a series of experiments, and the result proved that a great deal, if not all the common green tea used in this country is coloured artificially." The blue used in forming the green is usually *Prussian Blue*, which is highly poisonous.

Dr. Letheby stated, a few years ago, that within the previous three years, as many as seventy cases of poisoning had been traced, in England, to the colours used in fancy sweetmeats.

INFLUENCE OF TEMPERATURE AND VENTILATION ON HEALTH.

It is impossible to over-estimate the importance of the influence exercised on the human system by the temperature of the climate in which we live, both in and out of doors, and by the ventilation and drainage of the want of ventilation and drainage of the dwellings in which we live.

A moderately dry air is usually the most healthy; and, if the temperature is moderate, is most grateful to the feelings; whereas, a damp atmosphere, particularly if accompanied by an easterly or north-easterly wind, is very trying to the system, particularly to persons who possess a sensitive skin, or are liable to attacks of coughs and colds. It was long supposed that *severe* weather in winter was the most healthy, and so satisfied was the popular opinion on this point that "*A green Christmas, a fat Churchyard*," had become a common proverb in England. Since the collection of health statistics, however, by the Register General, all this has been found to be erroneous, the greatest number of deaths occurring in Winter, next in Spring, then Autumn, and the fewest of all in Summer. And, as far as observations have been made in Canada, and the Northern States of America, the same rule holds good.

There can be no health without *pure* air. It is wonderful how little attention is paid to this circumstance, even by many whose means will allow of their adopting any measure that health or comfort may render necessary. In fact, in thousands of instances, the possession of increased means seems to have led to diminished health. Five and twenty years ago, most of the country houses in Canada, whether log or frame, were built with large open fire-places; stoves were scarce; and a roaring wood fire not only kept the room warm and dried the atmosphere, but the draft

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caused them to daily ventilated the building, and carried up the chimneys any vapours and unwholesome smells. Of late years, however, this is very much changed; log houses and open fire places in the country have almost disappeared: the latter being replaced by stoves,—frequently far too large for the rooms they are intended to warm. The houses themselves being built very much tighter than formerly, there is little draft. Persons accustomed to sit many hours a day in these hot, tight rooms, soon get accustomed to them, and feel chilly when the door is opened, and a rush of cool, fresh air is admitted; but a person coming from the open air feels the room hot, unpleasant, close and suffocating. People living in these hot, close rooms soon begin to suffer in health. The skin becomes dry and yellow, and no one can have helped noticing how wonderfully prevalent neuralgic pains in the head and face have become in Canada within the last few years, mainly caused by exposure to the intense heat of stoves, and that varied by an equal exposure to the biting influence of cold winds without proper protection. A winter or two since, a fine healthy young man called on me, complaining of intense pain in his head and jaws; he fancied it was toothache, and was anxious to have two or three teeth extracted. On investigating the matter, I found he was occupied all day in the woods, in getting out timber, and, as long as he was in the open air, he suffered no inconvenience from his unpleasant visitor; but, when he returned home in the evening, as soon as he got into the hot room, the attack came on, sometimes keeping him awake a good part of the night. Of course, in such a case as this, losing the teeth would not remove the complaint.

Compositors in printing offices, living in close, hot, rooms suffer much therefrom, and many of them have their lives sadly shortened in consequence. Many of our School rooms and other public buildings are badly ventilated, and when these are also over-crowded, as frequently happens, the health of those who are compelled to frequent them, suffers accordingly. At the very moment I am writing this, one of our Canadian judges is laid up, and unable to attend to his duties, from the effect of exposure to the foul influences of an unwholesome atmosphere while presiding at the Assizes in one of our Court houses.

One of the medical practitioners in India, writing of the influence of over-crowding in producing Cholera, says: "The disease commits its greatest ravages in crowded ill-ventilated barracks, bazars, densely populated towns, crowded school-rooms, native huts—into which there is but one opening, and that closed at night. Whole families are sometimes swept away from exposure to this exciting cause. At Juggernaut it is an annual visitant. The town of Pooree contains 35,000 inhabitants, and the number of pilgrims sometimes amount to 150,000. The inhabitants are usually quite healthy before the occurrence of the festival, which takes place in June or July. But immediately on the arrival of the pilgrims, and when the lodging houses are literally crammed with inmates, cholera suddenly breaks out, and, in the space of a few days, hundreds are cut off." "This," he adds, "is not an occasional or incidental occurrence; it is an invariable one; and the disease which has thus been generated, as suddenly disappears on the dispersion of the crowd."

In warming houses, many people make a strange, and unfortunately a very serious mistake. Some years since, some crochety genius propounded the doctrine that a building should be heated from the *ceiling downwards*, instead of from the floor *upwards*, unmindful of the fact that heat ascends, and that it *will* ascend, in spite of you, and also oblivious of the good old maxim, "*keep the feet warm and the head cool.*" This individual, whoever he was, has had too many followers, and it is quite common now to enter a room, where the stove is not only too large for the space it is intended to warm, but the stove is even surmounted with a large drum, on a level with a person's head when sitting down. The consequence is that the air near the floor is cold, and about the upper part of the room fearfully hot; the natural result to those sitting in such rooms is cold feet and hot heads, followed frequently by colds, coughs, headache, neuralgia, fevers, loss of teeth, and various other disorders. There can be no health without plenty of fresh air, and also plenty of daylight.

Drainage.—This is a point on which many people are terribly careless. Not only are many otherwise well-built and handsome looking houses placed in situations naturally unhealthy from a difficulty in draining them, but many, erected in positions where drainage is easy, are left almost to the efforts of nature. This, however, is not by any means the worst of it. Many people make a regular practice of throwing all slops and refuse just outside the kitchen door, where they are left to pollute and poison the atmosphere till cleaned away by those friendly scavengers, the ducks and pigs.

"The most efficient cause of dampness in the air is the permanent retention of moisture on or near the surface of the ground, as in low grounds in which clay prevails, and where water accumulates or is imperfectly drained off, and where evaporation is retarded by the shade of many trees or of high rocks or hills. But, independently of soil, a house may be damp from its own materials, which, as in those built of limestone or marble, are constantly impregnating the contained air with humidity. Wet weather and damp winds are less injurious causes of humidity, because less permanent, but their influence is often manifest during their continuance, and always most so in localities that are damp from other causes." So injurious are these damp winds considered, that in Lower Canada, it is quite common to see the outsides of stone and brick houses boarded up on those sides exposed to the Easterly winds.

"In districts where lime is obtainable, much benefit may be obtained in damp houses, by keeping large pans of quicklime in several apartments, especially those of the basement and ground-floor. This is an excellent precaution against malarious and infectious diseases; its utility has long been known in preventing meat from becoming soon tainted in a damp larder."

"To diminish the dampness of clay and marshy soils in the immediate vicinity of dwellings, much may often be done by an efficient system of covered drainage; by the removal of superfluous trees and shrubs; and, where practicable, by covering the surfaces which are most commonly wet,

with light sand, gravel, brick and mortar rubbish, or some similar light and porous material, which may form an artificial superstratum, and intercept the influence of the damp ground. The insalubrity of many low parts of London (England), especially in Pimlico and Westminster, has been wonderfully diminished by the latter expedients." The effect of drainage in stopping the regular prevalence of Ague has been very conspicuous in many places in Canada, which formerly suffered much from this complaint; Chatham, on the Thames, and the eastern portion of the city of Toronto, where Ague is now scarcely heard of, are prominent examples.

INFLUENCE OF SLEEP.

Different people require different amounts of sleep; the more the brain and muscles are exercised during the day, the more sleep is required. It is a curious circumstance that the lions, tigers, hyenas, &c., in the Zoological Gardens, which in their wild state roam and feed at night and sleep by day, when in captivity reverse this order of things, and feed by day and sleep by night. Man sleeps longer than any of the larger animals, but the great baboon or chimpanzee, the organization of whose brain very closely resembles that of man, will take his six or eight hours' sleep if undisturbed.

The power of *intense cold* in producing sleep is very great in the human subject; and nothing in the winter season is more common than to find people lying dead in the fields and the highways from such a cause. When Dr. Solander was crossing the mountains which divide Sweden from Norway, in company with Sir Joseph Banks and several other gentlemen, he warned them, saying, "Whoever sits down will sleep; and whoever sleeps will wake no more." Shortly afterwards Dr. Solander was the first who felt an irresistible inclination to lie down, and one of his fellow travellers, Mr. Richmond, persisted in doing the same, declaring that "he desired nothing better than to lie down and die." Both lay down. Finding it impossible to proceed with them, Sir Joseph Banks and the rest lit fires with brushwood around them; having done which, Sir Joseph endeavoured to wake Dr. Solander, and happily succeeded; but though he had not slept five minutes, he had almost lost the use of his limbs, and the muscles were so shrunk that the shoes fell from his feet. He consented to go forward with such assistance as could be given him; but no attempts to relieve Mr. Richmond were successful—he died on the spot.

People of delicate constitutions, in whom the circulation of the blood is languid, are more readily affected by extreme cold than the strong and robust. Some years since, when practising in the south of Illinois, I had been spending the evening at the house of a friend. One member of the family, a gentleman in tolerable health, but not of very strong constitution, had taken a walk to the neighbouring village, only a mile and a half distant. As the evening was very cold, and he did not return as soon as he was expected, the family became a little alarmed, and part of them started off to meet him. They had not gone far when they found him lying by the fence, cold, stiff, and insensible. They

carried him in, and proper measures were adopted, but it was hours before he could be considered quite recovered.

Both the respiration and the circulation are diminished during sleep; the pulse becomes slower and fuller. The vessels of the skin relax; and it has been proved that a person sleeping healthfully and without any artificial means to promote it, will during an undisturbed sleep in a given space of time, perspire insensibly twice as much as a person awake. The temperature of the body, of course, under such circumstances, falls somewhat below its waking standard. On this account, people more readily take cold asleep than awake. "Therefore," says Dr. Elliotson, "persons cover their heads before going to sleep; and when habit has not overcome the necessity for this, cold is continually caught from its neglect. A draught of air is far more dangerous in the sleeping state, and the back of the body appears less vigorous than the front, as a draught at the back is much more dangerous than in front." It is important, therefore, that during sleep the back should be well covered. Dr. Elliotson adds that "Agues are caught more readily if persons fall asleep." Some persons are more readily affected by cold when asleep than others, and some are so very sensitive that a trifling variation in the covering at night, and even sometimes in the daytime, will produce cold. I once knew a young lady who had a habit of wearing a Coral necklace day and night. If by any chance she happened to take it off before going to bed, and forgot to replace it, she invariably took cold.

In severe winter weather, when the poor suffer much from cold, blankets are almost as indispensable to them as food. There is also one interesting and important fact connected with this subject; which is that sleep promotes the cure of all diseases.

How much sleep is necessary for a human being in good health? This must evidently depend a great deal upon the wear and tear to which the system is subjected during waking hours. Age, constitution, climate, occupation, &c., must be taken into consideration. During the first three months of life the time of the infant is divided between sleeping and feeding. As the development of the nervous system, in particular, goes on with remarkable rapidity at this period, the more it sleeps the better. In extreme old age much sleep is also required. The famous Dr. Thomas Parr, who died at the extraordinary age of one hundred and fifty-two years and nine months, latterly slept away the greatest part of his existence. Tall and bulky people are supposed to require more sleep than short and thin people; women more than men; and all animals sleep longer in winter than in summer. In a state of health, during the central period of life, a person actively employed will require—according as the nervous system is more or less fatigued—from six to nine hours sleep. We are informed by his son-in-law, that Sir Walter Scott, both as a young man, and in more advanced age required "a good allowance of sleep," and he indulged in it, saying "he was but half a man if he had not full seven hours of utter unconsciousness."

Dr. C. J. B. Williams says that "children, up to the age of six years, generally require at least twelve hours of sleep, besides an hour or more

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in the middle of the day. At about this age, the sleep at noon may be discontinued, but the night sleep can hardly be abridged with advantage, until about the tenth year, and then only to a moderate extent, until the period of puberty, after which it is generally proper gradually to reduce the period of rest to nine or ten hours ; and no farther diminution is expedient till the cessation of growth, when another hour or two may be taken from it." In more advanced life this extent of sleep is not less serviceable where it can be procured ; but at this period the capacity for sleep usually diminishes, and wakefulness or disturbed sleep is a common complaint of old age." "Females commonly stand in more need of sleep than males, and during pregnancy and nursing, additional rest is especially demanded. In such cases, too, the loss of sleep is attended and followed by peculiarly injurious results, manifest especially in the nervous system and general nutrition, in the form of mental derangement, impaired vision, deafness, paralysis, palpitation, convulsions, tremours, wasting, diarrhoea, &c. Persons convalescent from acute diseases, or otherwise weakened and reduced, require and generally obtain more sleep than in ordinary health, and it is so efficient an influence in the promotion of recovery, that artificial means are sometimes properly used to procure it.

Much has been said and written about *early rising* ; and there is no doubt that the *natural time* to rise is when the sun rises, but then the natural time to retire to rest is also when the sun retires—or at sunset. Many people, however, are so *habit-ridden*, that they insist upon getting up in winter and breakfasting by candle-light, merely because their fathers did it before them. "The laws of nature may be tampered with, but they cannot be subverted ; we may step out of the paths she has prescribed, but we cannot go far beyond them with impunity. It needs scarcely any evidence to prove that the day was intended for exercise and the night for repose. That night cannot with impunity be converted into day, has been proved by a variety of observations." Two Colonels of horse in the French army had much disputed, which period of the twenty-four hours was fittest for marching and for repose ; and, it being an interesting question, in a military point of view, they obtained leave from the commanding officer to try the following experiment : One of them, although it was in the heat of summer, marched in the day and rested at night, and arrived at the end of a march of six hundred miles without the loss of either men or horses ; but the other who thought it would be less fatiguing to march in the cool of the evening and part of the night, than in the heat of the day, at the end of the same march had lost most of his horses and some of his men." Another remarkable circumstance, says an author, has been observed. It is more unhealthy to get up before the sun has risen and burn candles until daylight, than it is to sit up by candle-light after sunset. This is confirmed by Sir John Sinclair, who says : "I have no doubt of the superior healthiness, in the winter time, of rising by daylight, and using candle-light at the close of the day, instead of rising by candle-light, and using it some hours before day-light approaches." Sleep is a provision of nature to restore the exhausted energies of the system,

physical and mental. When the nervous energy of the system is restored, the patient will usually wake of himself, and it is not advisable to wake him up unnecessarily.

Too much sleep, however, is debilitating. It weakens the muscular powers, and, in persons predisposed thereto, promotes the accumulation of fat.

There are times, however, in the lives of most people, when, from some cause or other, sleep is an impossibility. Ought narcotics to be taken in these cases? Much will depend upon the cause, the nature and the persistency of the sleeplessness. In some cases it is desirable, and in others, absolutely necessary to produce sleep artificially, and *when really necessary* we should not hesitate. Thousands of young children, however, there is no doubt, are annually destroyed by narcotics. The Spanish women are said to employ a more harmless method, and to put their children to sleep by gentle friction up and down the backbone.

INFLUENCE OF FOOD.

It may be asked by some what constitutes *food*? Which question may be answered by asking another, what substance is there, animal or vegetable, that has not at some time or other, or by some one been used as food? The English race at home consume mutton, beef, pork, veal, kid, game, poultry, fish, with fruit and vegetables of all kinds; washing them down with beer, cider, wine, milk, buttermilk or water. The Frenchman uses the same, with the addition of frogs and horse flesh, and generally substituting light wine, for beer and cider. The Russian consumes large quantities of train oil. The Abyssinian frequently takes meat raw, which after all the talk about it, is not worse than the European and American habit of swallowing oysters raw. The Australian Stock-keeper lives principally on beef and mutton, varied occasionally by a joint of Kangaroo; while the East Indians and Japanese live largely on rice. John Chinaman will make a hearty dinner on a dish of puppies, and a West Indian will feed equally well on monkey-pie and parrots. Bear's flesh, rattlesnakes, snails, locusts, lizards, grasshoppers, seal's and whale's flesh have been occasionally used as food, while an Arabian will have no hesitation at taking a long journey through the desert, with no provision but a small parcel of Gum Arabic.

All kinds of theories, good, bad, and indifferent, have been started by different individuals at different times, respecting the feeding of the human subject. Some recommend plain food, others luxurious; some, few dishes, others many; some that only two or three meals a day should be taken, while the hearty English farmer will take his five or six. It is a standard rule of health that food, if not properly masticated cannot be properly digested, yet many people will tell you *they* cannot sit long over their meals, they have *work* to do; and yet, these same individuals, after *bolting* a meal in ten or fifteen minutes, will sit half an hour, picking their teeth or smoking, before returning to their employment.

There is no doubt that a variety of food is most congenial to the

human system, and I am satisfied that if human beings had been intended to live upon two or three articles, such a great variety of eatable things would never have been provided by the Almighty. In most European countries people live as well as their circumstances will allow. This, however, is not by any means the case in Canada. Many people are far too anxious to accumulate property, and will keep themselves and their families on improper or unsuitable food till their constitutions are irretrievably ruined, and then they resort for relief to quack medicines. In the old country, the poorer population in the country will live a great deal on fat bacon by way of meat; but then they generally have plenty of good cheese, and good beer, and in addition to this, each cottage has its garden, and a good supply of green vegetables the whole year round. The Canadian Farmer, on the contrary, even when well off, will not generally have green food more than three or four months in the year. He will live for a good part of the year on salt meat, with no vegetables but potatoes, and no beer, and frequently what he calls tea, is of the poorest kind. (*Salt in excess irritates the stomach, retards digestion, and causes feverishness with thirst. According to Liebig, salt impedes the deposition of fat. Animals will not fatten on salt food.*)

Now, to keep up the strength of the muscles, and the general tone of the system, requires a certain quantity of such food as can not only be swallowed, but as can be *digested* by the stomach. Meat to be digestible and nourishing must be well fed, healthy, tender, and properly cooked. There is far too much tough meat, and far too many tough beefsteaks consumed in Canada. In Europe, a small portion only of the animal is cut into steaks; those portions that are sure to be tender when cooked, and the remainder of the animal is converted into stews or roasts. In Canada, on the contrary, the butcher commences at the neck of the beast, and cuts away until he gets to the shank; cutting it all into steaks. Soon after I arrived in Canada, I engaged apartments in a private family, I had my own rooms, and was to board by myself, but they were to supply me with food. The first day they gave me a tough beef-steak for breakfast, and the same for dinner; the next day it was the same: tough beef-steak for breakfast, tough beef-steak for dinner. This kept on regularly for a week, when I asked if they could not *stew* the steak for a change, and I told them how to do it. They tried it once, but, I suppose the exertion was too great, and they never tried it again. After putting up with these fried steaks for a month, I got tired out, and left the meat untouched. I suppose they then thought a change necessary, and they gave me fried eggs and bacon for breakfast, eggs and bacon for dinner; next day, eggs and bacon for breakfast, eggs and bacon for dinner; and so kept on till I left the eggs and bacon untouched. Next day they took the hint, and returned to the tough beef-steak, and, when this in turn was untouched, to the eggs and bacon. So, I came to the conclusion at last, that they really only understood these two dishes, and, after eating them for eight or nine months, I could stand it no longer, and shifted my quarters.

Man is by nature and habit an *omnivorous* animal, (that is, he consumes and requires a variety of food, both animal and vegetable); and,

in general, his health is best maintained by mixed proportions and varieties of animal and vegetable food. The unhealthiness of many articles of food, even those supposed to be very nutritious, *when taken alone*, is sufficiently shown by experiments made by some of the French chemists. "They fed dogs, geese, donkeys, and other animals, on articles which are generally considered highly nutritive, as sugar, gum, starch, oil or butter; the animals died with symptoms of starvation almost as soon as if they had been kept without food. Even bread, when too fine, is insufficient for nutriment. A dog fed on pure white bread lived only fifty days, whereas another, fed with the coarsest brown bread, was well nourished, and seemed capable of living to an indefinite period." The necessity of a proper combination of organic elements for the food of animals has long been shown by Dr. Prout, who has pointed to Nature's food, *milk*, as the great type of all proper kinds of nourishment; as it contains albumen, oil, sugar and water, so all other kinds of food used for ordinary sustenance, ought to include these elements, or others identical in composition, and, in fact, all combinations of food sanctioned by custom do contain these ingredients. Bread contains two of these, *gluten*—which is vegetable albumen, and starch, which is identical in composition with sugar. Meat contains albumen and fat. An insufficient supply of fat in the food has been observed to cause the following results: loss of flesh, the skin becomes skinny, wrinkled and dry, deficient secretion of mucus in the various passages, insufficient formation of bile, and consequently indigestion and feculent excretions, with diminution of animal heat. It is plain, therefore, that moderately fat meat must be the most wholesome. Excess of fat in the food will disorder the stomach by its indigestibility, causing heart-burn or sickness, and sometimes a bilious attack. Fruits and vegetables, in fair quantity, are healthy, and assist in preventing the occurrence of gout and gravel. The Dutch have a proverb, that "Fruit is gold before breakfast, silver before dinner, and lead at supper." It must be borne in mind, however, that fruits are usually less acid in Europe than they are in America, and the habit which so many young people in Canada have, of eating sour and unripe fruit, is very injurious. Food may be *excessive* or *deficient* in quantity. The quantity that should be taken must depend upon the quantity required, and that must depend upon the amount of bodily exertion and quantity of food necessary to keep the system up to a healthy standard. Food properly masticated is easier of digestion, and *parts* more readily with its essence, than half chewed food; consequently, people who eat slowly require and consume less food than those who *bolt* it.

Defective nourishment may excite various disorders. Deficiency of food, if long continued, causes general weakness of the functions, and wasting of all the textures, except those of the nervous system. The blood becomes thin, the gums spongy and bleeding; fat disappears; muscles become thin and flabby; the legs swell; diarrhoea often occurs; ulcers appear; a state of scurvy is produced, which, when far advanced, is often incurable. The bad influence of poor living is much more felt in those who are confined in these habitations, than in those who are

exposed to plenty of fresh, pure air; and it is under such circumstances that the unhealthiness of some kinds of food; when taken alone, shows itself. Thus, even bread, with meat or broth will not prevent the occurrence of scurvy; but a sufficient addition of fresh vegetables prevents this disease from appearing. There is no doubt that, to the too prevalent custom in many country parts of Canada, of living so much upon *salt* meat without a corresponding proportion of green vegetables, may be traced the fearful loss of teeth by young people, particularly by the girls. "Fever, malignant dysenteries, and other disorders of that class, have been the invariable attendants on all the great famines in Europe."

In regulating our diet, it is advisable as far as our means will allow, to select those articles of food that are the most nourishing, and the most easily digested. Meat should never, if the weather will allow of its being kept, be cooked too soon after it is killed. Fresh killed meat without exception, is always tough. Mutton, more especially in this country, where so much of the beef is tough, is more easily digested than almost any other meat. Fish, poultry, game are easily digested. Puddings, in Canada, are almost unknown, that is, of course, comparatively speaking. You may dine at twenty houses without seeing a pudding; nothing but apple or pumpkin pie, baked in a plate. The good, old fashioned, wholesome "suet pudding," so much in use in the old country, particularly as food for children, is seldom seen. Being composed of flour with beef suet chopped fine, and eaten with either sugar or a little preserve, it furnished most of the elements necessary to produce good healthy flesh. As a general rule, too much tea is taken in Canada, and much of that little better than hot water. Tea, to be of any service as a beverage, should be of good quality, and made of proper strength. So, also, with coffee; if not made strong, coffee, like poor tea, is mere hot water. As for the stuff sold and drank by many people as "Dandelion Coffee," it is most abominable trash.

It is the general custom, in this country, to take but three meals a day, but I am satisfied, both from observation and experience, that persons taking four or five meals in the day, not only have better health, but they actually consume less food. Many medical practitioners, as well as others, lay great stress upon the necessity of taking meals at regular hours; but all this is quite contrary to the laws of nature. Nature says: "Eat when you are hungry, drink when you are dry." People will say: "Don't eat now, it only wants an hour till dinner time, you'll spoil your appetite." Well, is it not better to spoil your appetite, than to spoil the tone of your stomach? Shut up a horse in a stable, and feed him regularly three times a day, and he will dispatch his gallon of oats in ten or fifteen minutes, half of them unchewed, and consequently indigestible; turn the same horse out to grass, and let him gather his own food at his leisure, and he will spend half his day in eating his food, picking a bit here and a bit there; and a very little time will show, in the improved condition of the animal, the superiority of the natural over the artificial mode of feeding. No animal, unless forced thereto by the caprice or the necessities of man, will take its food at stated times, and confine itself to three meals a day.

Many people in Canada say they cannot drink beer, particularly in summer; something of course depends upon habit, but beer will seldom disagree with a healthy person, if it is good. Much of the beer sold in Canada, however, is of poor quality; it is not strong enough to keep for any length of time, and is consequently drank too new, and before it is sufficiently fermented; consequently it continues fermenting after it is taken into the stomach, and in this way disagrees. Next to good, sound beer, strong coffee is decidedly the best beverage that can be taken; for breakfast it may be taken with sugar and milk or cream; at other times, according to the taste of the drinker, it may be taken either with or without milk and sugar. For those whose stomachs will bear it, chocolate is very nourishing.

For young children, milk, bread and milk, oatmeal porridge and milk, corn meal and milk, rice puddings, suet puddings, with a little gravy or finely chopped meat, will form the best articles of diet; but the value of all combinations of milk for food will depend upon the quality of the milk, and that will mainly depend upon the quality of the cow's food.

In old age, as well as in infancy, the stomach is weak, and incapable of digesting hard and tough food. The late Dr. Kerr, of Northampton, having outlived his powers of digestion, and being incapable of taking solid food, had for the last few years of his life, two women in constant pay, to furnish him with the only food he could digest. This was indeed, second childhood. I do not know at what age he died.

INFLUENCE OF AIR AND EXERCISE.

No one can be long healthy, if deprived of fresh air and sufficient exercise; the term *sufficient* however, must be regulated by the health, habits and nature of the individual. Some persons have been accustomed from early youth, to walk several miles a day, or to take other active exercise, on horseback, in rowing, cricket, gardening, &c. Such persons, of course, require much more exercise to keep them in health, than those of a more delicate constitution, or those whose occupations have been of a more sedentary character. To those who are fond of it, horse exercise is decidedly the best; walking, rowing and cricket are all good; swimming, if not continued too long at a time, is good in summer for those whose constitutions are strong enough to admit of it. Skating, like dancing, cannot be recommended on the score of health. If people could be satisfied with skating for an hour or so at a time, no mischief would result from it; but when young and delicate girls, not satisfied with skating several hours in the day, must also skate for two or three or four hours at night, with the thermometer perhaps near zero; who can wonder at the frequent serious result. So with dancing; a girl, lightly clad, will dance through a cold winter's night, and then return home, a little before daybreak, perhaps several miles. It is well known that three-fourths of the cases of consumption in this country have their origin in these amusements.

Excessive bodily exertion of various kinds is a common exciting cause of disease. The heart, excited to inordinate action, is often strained and

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distended, and its function or even its structure, and that of the great vessels, may be impaired in consequence. This is especially apt to happen if there be anything already imperfect in the structure of the organ, its valves or vessels; and there are naturally very various degrees of perfection and strength in these parts.

The brain is particularly liable to suffer from violent exertion, especially if joined with a stooping or constrained posture; for its vessels are not, like those of the limbs and trunk, supported by muscular pressure upon them, and the excited heart can therefore send its blood into them with more force. Hence giddiness, noise in the ears, deafness, defective vision, convulsions, palsy, apoplexy, have been brought on by violent exertion.

The lungs are also apt to suffer; for the blood being returned to them faster than they can arterialize it, they become greatly congested; hence cough, shortness of breath, bleeding at the lungs, or inflammation of the lungs may ensue.

Other internal organs are sometimes disordered by the blood thrown or retained in their vessels by the pressure of external muscular action. Derangement of the liver, vomiting of blood, piles, &c., have been brought on by such a cause. The sharp pains or stitches felt in the sides or abdomen, on running fast, are commonly supposed to be in the liver or spleen; but more probably they are spasms of the intestines—temporary colic, produced by irregular pressure on them when overcharged with blood.

Some kinds of muscular exertion peculiarly effect certain organs. Thus, loud reading or speaking, or blowing wind instruments, especially tries the organs of respiration and the voice, and may cause hemorrhage, inflammation and various diseases of these organs. Excessive or rough riding or leaping may injuriously affect the kidneys and organs of generation. Straining to lift a heavy weight, or at stool, or in any continued effort which implies holding the breath, endangers the structure of the vessels of the chest and brain.

Bodily exertion, long continued, may also cause disease by its exhausting effects. In extreme degrees this exhaustion may amount to fainting, and even death; short of this it may cause great weakness of muscles, and of the heart, with corresponding depression of other functions; hence arises the low typhoid fever which sometimes follows prolonged fatigue. In slighter cases, we have giddiness, faintness, nausea, loss of appetite, indigestion, costiveness, and other varieties of injured function. Excessive fatigue may cause such an amount of sleeplessness as to bring the patient into a state almost resembling delirium tremens.

Strong mental emotion is a common cause of disease. "Closely knit together as the mind and body are, it is not surprising that they should be ever ready to affect each other. The heart most remarkably suffers from such causes. Thus, a sudden shock, whether of grief, surprise, fear, or even joy, may cause fainting, nay even death itself has ensued; and the expressions "frightened to death," and "killed with joy," are not always mere figures of speech. Sudden acute pain often causes

fainting." Apoplexy, palsy, inflammation of the brain, epilepsy, and insanity, have been caused by excessive anger, terror, surprise and joy. A piece of very bad news frequently takes away appetite, or impairs digestion. Fright or anxiety often loosens the bowels, or brings on a bilious attack or jaundice.

Excessive evacuation, or loss either of blood or of some secretion, is frequently a cause of debility, which predisposes to other diseases; but, if the loss be great or sudden, it may produce immediate disease. A certain fulness of the heart and blood-vessels is required for their healthy functions, as well as for those of all the organs which they supply. If a moderate quantity of blood be suddenly withdrawn, or a large quantity less suddenly, the heart's action will be impaired, rendered irregular, and may be interrupted, and the brain not receiving a current sufficient to maintain its functions, there may be fainting, with loss of consciousness, accompanied or followed by disordered function, palpitation, delirium, convulsions, or by death. Lower mentions a case of extensive enlargement of the veins of the lower extremities, in which the patient could not stand without fainting until the legs were bandaged.

Inattention to the calls of nature is a prolific source of disease; when the bowels are not emptied as frequently as they should be, the feces accumulate in them, become offensive, and the more fluid portions become absorbed into the system and poison the blood; frequently the coats of the bowels become ulcerated and diseased, and Piles are a very common result of allowing the bowels to get and to remain costive. Rupture of the bladder has not unfrequently occurred. Loss of power or even neglect to empty the bladder when nature gives the hint, will cause an accumulation in that organ, over distention, followed by loss of power. The retained urine is liable to be partially re-absorbed into the system, giving a urinous smell to the breath and perspiration, and sometimes causing typhoid symptoms. The retained urine is also liable to decomposition; highly irritating and offensive matters are produced, which cause injury to the bladder, rapidly extending up the ureters to the kidneys. Checked perspiration is a well recognized cause of disease, resulting in colds, coughs, rheumatism, inflammations and fevers.

An artificial or diseased discharge or secretion, as that of a seton or issue, or from an ulcer or diseased membrane, or an unnaturally profuse flow of an ordinary secretion—such as looseness of the bowels, if so long established as to become habitual, cannot be suddenly suppressed without great risk of exciting disease. Apoplexy has not unfrequently resulted from the sudden drying up of an old sore.

There can be no genuine health without *cleanliness*; an old proverb says that "cleanliness is next to godliness;" and certainly a want of cleanliness is a prolific source of skin diseases, fevers, and affections of all those organs that sympathize with the skin.

INFLUENCE OF CLOTHING.

In a climate like Canada, where the changes of temperature are not

only very frequent, but also very great, too much attention cannot be paid to keeping the body properly clothed, particularly in spring and autumn, when the transitions from cold to heat, and from heat back again to cold, are very sudden. Flannel should be worn next the skin all the year round; and the feet should always be kept warm. Instead of that, half the population in country places allow their children, even grown-up girls, to go about all the summer without shoes and stockings; and sometimes when it is impossible for them to do so without taking cold. The consequences are coughs, colds, headaches, rheumatism, chilblains, inflammation of the bowels and of the lungs, pleurisy, &c. In former days, when women went out of doors, they protected the head and face with a comfortable bonnet or hood; fashions have altered, and for some time past they have been satisfied with a mere "make-believe," which leaves both head and face exposed to the inclemency of the weather, both wind and sun. The consequences naturally are a harsh, dry, brown or yellow skin, eyes burnt out, wrinkled brow, red nose, and constant liability to attacks of neuralgia and headaches. Many people, with no excuse of poverty to plead, expose their children, or allow them to expose themselves (which is just as bad), when at home, to all changes of the weather, with insufficient clothing. An author, after alluding to the manner in which horses, sheep, and other animals change their coats, according to the season, continues: "The preceding facts are not devoid of instruction in regard to the dress of human beings, who should learn to cover their nakedness under the guidance of experience and reason, which may be better or worse than instinct, according to whether they are well or ill exercised. It argues little for the boasted superiority of man's reason, if it do not guide him to means more effectual in resisting the hurtful action of external temperature, than those instinctively possessed by the lower animals; and yet, there can be little doubt that none of these suffer from cold, wet, and atmospheric changes, to the degree in which human beings do. In truth, reason and common sense are too frequently set aside by foolish habits originating in vanity, caprice, prejudice, indolence, ignorance, or some such evil influence, and disease and infirmity are the penalties incurred by folly."

In classifying the diseases treated of in this work, it will perhaps be most convenient for the reader to divide them into diseases of *childhood*, and diseases of *grown people*. Although to some extent, the one period may gradually glide into the next, still there are many complaints to which each period of life is more particularly liable than the one preceding or following it. Thus, Measles is a disease of childhood, yet grown people are occasionally attacked by it.

DISEASES OF CHILDREN.

Much of the sickness of infants is traceable to improper diet in the mother. Many women are fond of pickles, vinegar, and sour fruit, and many also accustom themselves to live too much on salt meat. The milk disagrees with the child, turns acid on its stomach, and produces gripes; the mother then gives it "soothing syrup," or some other abomi-

nation to make it sleep. It is no wonder so many infants die. One of the first complaints most commonly met with in young children, is—

THRUSH, OR INFANT'S SORE MOUTH.

It frequently makes its appearance when the child is only a few weeks old. When first noticed, it usually appears in little sore or whitish spots about the corners of the mouth, or inside of the lower lip; these increase in number, and gradually spread to the tongue, the roof of the mouth, the inside of the cheeks, and sometimes extend to the throat. In some cases, the disease has been known to extend to the bowels. The eruption occasionally turns of a yellowish or brownish colour, and this is considered an unfavourable sign. When the throat is affected, the voice is apt to be hoarse. The complaint is sometimes accompanied by Diarrhœa, with pains in the bowels, and the stools are frequently green and slimy. The child also frequently vomits greenish matter, smelling sour; sometimes a little fever accompanies the complaint. In general, the complaint is trifling and unattended with danger, but in children of bad constitutions it frequently proves fatal. In these cases, however, there is usually some other complaint existing at the same time. The Thrush is of very uncertain duration, sometimes it disappears after a few days, and sometimes it may continue for several weeks.

Treatment.—Give the child a small quantity of *Carbonate of Magnesia*, about twice a day; (from two to four grains according to the age of the child,) or, if the child should appear to be griped, the *Carminative* may be given instead. If the bowels should be much relaxed, one or two grains of finely powdered chalk may be added to each dose. As an application to the mouth the very best is a mixture of *borax* and *honey*. A quarter of an ounce of *borax*, finely powdered, to be mixed with an ounce of *honey*. The best way to apply it is for the mother or nurse to dip her little finger in the mixture, and gently rub it over the inside of the child's mouth. This is all the treatment/advisable, if the complaint does not yield to it, it is better to have the child seen by a competent medical man, in case something more serious should be the matter. If the child is sucking, it is highly necessary that the mother should pay attention to her own diet; avoid pickles, vinegar, acid fruits, and live as much as possible on boiled mutton, poultry, rice puddings, and such like diet.

TEETHING.

Some children cut their teeth easily; most of them, however, suffer more or less, during that operation. The child becomes fretful, feverish, often screams with pain, and is frequently sleepless at night. Sometimes convulsions occur. The gums swell, and frequently become red and tender. If the bowels become disordered, a little carbonate of magnesia, mixed with a little peppermint-water, or a little of the *Carminative* may be given two or three times a day. A warm bath, once or twice a day (not so hot as to hurt the tender skin of the child,) will be of service. As soon as the teeth are sufficiently near the surface, which

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may be known by the teeth showing whitish through the gum; considerable relief will be afforded to the child by lancing the gums, either with a gum lancet or a sharp penknife. As nature seems to have given the child a natural instinct for biting at things during this period, it is advisable to assist nature as far as lies in our power. It is generally supposed that biting hard substances tends to harden the gums. Ivory rings, which used formerly to be used, are therefore laid aside, and their place supplied by those of India Rubber. In lancing the gums, it is best not to lance more than one or two teeth at a time, or we may cause more bleeding than is desirable. Children will frequently make considerable opposition to the operation the first time, but instinct seems to teach the child that the relief experienced is from the lancing, and I have seldom seen much trouble the second time.

During teething, children are apt to be affected with sores on different parts of the body, caused a good deal by friction, from parts of the tender skin rubbing together, and partly from constitutional irritation. It is sufficient in these cases to powder the sore places night and morning with a little *hair powder*, *finely powdered starch* or *Calamine powder*. It cannot be too often repeated that, during the time of suckling the child, the health of the child depends mainly upon that of the mother. If the mother lives properly, and the milk is of good quality, the child (apart from any constitutional taint,) will grow strong and healthy; if, however, the mother lives improperly, or, in any way impairs her own health, the child will necessarily suffer.

VACCINE OR COW-POX.

Possibly hardly any discovery has ever been made of so much benefit to the human race, as that Cow Pox was a protection against the contagion of Small-Pox. When we consider that Small-Pox has always been, not only the most disgusting, but one of the most fatal of diseases; when we think of the thousands who in past ages used to die of this hideous disease, and of the many who when recovered, were disfigured for life, we can hardly express our gratitude to that individual, the late Dr. Jenner, whose persevering investigations led to so valuable a discovery.

At the time the discovery was made, inoculation for Small-Pox, was largely practised in England, as it was found that those who were inoculated for the disease, when they were in a good state of health, had it more favourably than those who took it in a natural way, when, perhaps, the system was out of order. Dr. Jenner, being largely engaged in the practice of inoculation in the county of Gloucester, in England, found certain individuals who would not take the disease. On inquiry he ascertained that these parties had had a complaint from the Cows (caught by milking them when the teats were affected with pustules,) which complaint, in that neighbourhood, was supposed to be a preventive against the *Small-Pox*. The idea occurred to Dr. Jenner that the complaint might be artificially communicated from one individual to

another, and he immediately commenced a series of experiments to test the facts. Having collected sufficient proofs, he published in June, 1798, an essay, entitled, "Inquiry into the cause and effects of the Variolæ Vaccinæ." This essay attracted great attention, additional evidence was soon accumulated; and the practice of Vaccination spread with great rapidity. The British Parliament voted Dr. Jenner the handsome sum of £30,000 sterling. "In 1799, Vaccination reached the United States; in the following year it was admitted into France, and other parts of Europe, and even to India, and very soon to almost all portions of the world.

Opinions differ as to the age at which to vaccinate a child. A good deal must, of course, depend upon the state of the child's health, as it is desirable that the child, when vaccinated, should, if possible, be in a good state of health. Then again, the sooner the child is vaccinated the less chance there is of its suffering from its coming in the way of Small-Pox. I have vaccinated persons of all ages, and I think the sooner a child is vaccinated after it is six months old the better. It is not generally supposed that any other disease can be communicated along with that complaint, but, as many people have a little prejudice on that point, it is as well to select a healthy child to vaccinate from, and vaccination is now so universal that there is usually no difficulty in finding one whose state of health is satisfactory. In vaccinating a child, I have generally inserted the lymph in one place in each arm; this is the usual English practice. In vaccinating, the less blood there is drawn from the puncture the better. I have little doubt that many of the cases of "failure" have arisen from the bleeding from the puncture *washing out* the lymph. In America, it is a common practice take the *scab* from the child and use that for the purposes of vaccination; but in England the lymph is generally employed, either fresh or preserved on little pieces of ivory, called *Points*, or else between two pieces of glass, about an inch square. Where possible, the children, the one to supply the lymph, and the children to be vaccinated, are brought together. Two or three punctures are made in the vesicle with a lancet; the ivory points, or rather, the *points* of the ivory points are dipped in the oozing lymph, and allowed partially to dry for two or three minutes; then, a very slight puncture is made in the arm of the child to be vaccinated, and one of the points inserted in the puncture, and allowed to remain there for ten or fifteen minutes, after which it is withdrawn. Occasionally, after making the puncture, the lancet itself is dipped in the lymph, and then re-inserted in the puncture, and the lymph wiped, as it were, into the wound. Sometimes the lymph is obtained by making small punctures in the sides of the vesicle, then gently pressing the glass thereon, the lymph oozes on to the glass. Another piece of glass is placed on the first, and the lymph glues the glasses together. When wanted for use, the glass is held over the steam from a cup of hot water, and the glasses soon separate. I once vaccinated forty (of all ages) one afternoon. Having previously vaccinated two or three children in the village where the others resided, I made an appointment for them all to meet me in the school house on the ninth day, and, having a plentiful supply

of points the operation was soon over. Out of that forty only two required re-vaccination.

Vaccine-lymph is sometimes put up in small glass tubes for sending to a distance, but they are too liable to accidents. When practicing in Illinois, some years ago, I wrote to the Royal Vaccine Institution, at London, (England), for some lymph, which was sent me in a letter. There were two or three tubes, and two or three points. The tubes were smashed, I suppose, in stamping the letter; and I got just lymph sufficient to vaccinate one child; from that I vaccinated others, and eventually nearly all the children in the neighbourhood. Although the lymph on the points had been six weeks on the way, it was perfectly good. The eighth or the ninth day is the usual time for taking the lymph in England. If taken on the eighth, the child vaccinated thereby will usually have the Cow-Pox at the height a little earlier than if taken on the ninth day.

The majority of children suffer so little from vaccination that no after-treatment is necessary; beyond taking care to arrange the sleeves of the child's dress in such a way that they do not rub and irritate the pustules. About the third day after vaccination the pustule begins to rise, and continues enlarging till about the seventh or eighth day, when it is round, flattened at the top, of a pale pinkish or flesh-coloured tint, semi-transparent, and, in point of shape, very much resembling those seeds of the mallow tribe, called "cheeses" by the children. There is generally a little redness of the skin surrounding the pustule, which increases in diameter with the growth of the pustule. About the tenth day the pustule loses its transparency and becomes opaque, and, after a few more days, dries up, and the scab falls off.

It sometimes happens that about the fifth or sixth day the child becomes feverish, and restless; when this is the case, a few mild doses of Magnesia, or Magnesia and Rhubarb, or Castor Oil will be sufficient to effect a change.

Some persons are much less susceptible to the Vaccine virus than others, and more or less so at one time than another. I have known children vaccinated five or six times without taking the infection, although there was no doubt about the goodness of the lymph. On the other hand, I recollect an instance of a child, four or five years old, which not only perfected the pustules on the arms, where the lymph was inserted, but, actually had a crop of pustules distributed over the body—some ten or twelve of them—which were perfect Vaccine pustules, and ripened about the same time as those on the arms. In this case the constitutional disturbance was not greater than that of the general average of patients. Some people have an idea that, after a certain number of years, the effect of the Vaccination wears off, and that, in order to insure protection against Small-Pox, it is necessary to re-vaccinate; but the experience of the majority of the medical profession does not encourage that idea. It is true that, occasionally, a person who has been vaccinated will take Small-Pox, but, the disease is always mild, and, it is certain that not a greater number of persons take Small-Pox after vaccination, than take Small-Pox a second time.

In case of the appearance of Small-Pox in any neighbourhood, the inhabitants should not hesitate a moment, but, should there be any amongst them—young or old—who have not been vaccinated, they should have the operation performed at once; even when the Small Pox has attacked one member of a family, the vaccinating the remainder (even if they are living in the same house), will usually prevent the spreading of the disease.

Some people have a prejudice against having their children vaccinated, from the idea that other diseases may be propagated from child to child along with the Cow-Pox; this, however is quite a needless alarm, as the experience of the Profession leads them to quite a contrary opinion.

CHICKEN-POX.

Chicken-Pox is a contagious eruptive disease, which usually commences with a slight fever, frequent headache, and occasional vomiting. Sometimes the fever is so slight as to escape notice, and sometimes altogether wanting. After a short time, usually a day or two, an eruption breaks out, generally first appearing on the breast, shoulders and back, from whence it spreads to the scalp, face and limbs. The face is usually less affected than in Small-Pox. The pustules are sometimes numerous, sometimes few, and, almost always quite distinct. They first appear as small bright-red spots, which soon become vesicular, (that is, rise into pimples); and sometimes they seem to break out in that form. The eruption is not unfrequently attended with itching or tingling, which causes the child to scratch and rub itself, thus frequently breaking the heads off the pimples. The unbroken vesicles are generally from the eighth to the sixth of an inch in diameter, rounded at top, transparent, colourless or slightly yellow, and very easily ruptured. Sometimes they appear in successive crops for two or three days. About the fourth or fifth day they begin to shrink and dry up; about the sixth day small brown crusts appear, which gradually harden, and drop off about the ninth or tenth day, leaving a little discolouration, but no pits. If, however, the pustules are much scratched and irritated, they will occasionally leave pits behind them. Chicken-Pox has, no doubt, occasionally been mistaken for *Small-Pox*, but it is a much milder disease; in fact, it cannot be said to be ever dangerous. But little treatment is required; a few doses of cooling physic (Cathartic Powders two or three, according to the age of the child), or a dose or two of Castor Oil, will generally be sufficient, with cooling drinks, and a mild diet. The child should be kept in doors during the complaint, and as soon as the scabs fall off, a warm bath will be advantageous. Chicken-Pox occasionally attacks grown people, but comparatively seldom.

INFANTILE CHOLERA,

Or Summer Complaint of Children.

This complaint, as its name implies, usually commences with the

heats of summer. It affects children between the ages of three months and two years, though sometimes it occurs a good deal later. It is said by an American Physician, that, "it is confined almost entirely to cities, and prevails most in those of largest size, and most densely peopled," but, in Canada, it is not by any means uncommon in country places.

The attack is often preceded by Diarrhoea, but sometimes the vomiting and purging commence at the same time. In fatal cases, of short duration, the vomiting usually continues to the end; but when the disease terminates favourably, or is much protracted, the vomiting often subsides, or ceases altogether, leaving only the Diarrhoea behind. Occasionally, the disease is exceedingly violent and rapid; the vomiting and purging are almost incessant; the stomach rejects everything swallowed; and, if relief is not afforded, prostration comes on, with a cool and clammy skin, pale and shrunken features, half-closed eyes, insensibility, and death in from twenty-four hours to three or four days. Much more frequently, however, the attack is attended with feverish symptoms, and the case protracted from one to several weeks. In such cases the pulse is frequent, tongue furred, extremities cold; abdomen sometimes painful on pressure. During the complaint the child generally sleeps with the eyelids more or less open, there is generally thirst, the appetite is variable and capricious. The stools are frequently green, or yellow, sometimes tinged with blood, sometimes dark coloured; sometimes worms are passed. *Infantile Cholera* is supposed to be caused by heat combined with impure air; assisted frequently by improper diet, exposure to cold, worms and teething.

Treatment.—If the child is sucking, considerable attention must be paid to the health of the mother, and if her milk should appear to disagree with the health of the child, it must be changed for fresh cow's milk, with Arrow Root, Sago, or ground-Rice. Sometimes, when there is much acid in the child's stomach, the milk becomes curdled and thrown up. In this case a little *Magnesia* (according to the age of the child), given two or three times a day, combined with a little Peppermint or Carraway water, will frequently stop the sickness. If the bowels should be much relaxed, a teaspoonful of Chalk Mixture, or of the *Astringent Mixture*, No. 7, may be substituted for the *Magnesia*, and given three or four times a day. When the Diarrhoea subsides, a little *Magnesia* may be added to the Chalk Mixture, so as not to confine the bowels. A little chicken or mutton broth may be given occasionally; say once or twice a day. Fruit or vegetables (especially pickles) should be prohibited. Calf's-foot jelly is a mild and nourishing food, so also is isinglass jelly.

Thin flannel should be worn next the skin; and the feet and legs should be kept warm. A warm bath, up to the arm pits, once or twice a day, will be of benefit.

CONVULSIONS.—(*Infantile*).

Convulsions in children may either occur as a consequence of other diseases, or they may come on suddenly, without any warning. The voluntary muscles of all parts of the body may be affected, or the spasms

may be confined to one half the body, or to a single limb, or to the features. There may be only a single attack, or several in succession. During the fit, the face is sometimes pale, sometimes purplish or livid; the lips turn blue, the features often appear to be swollen, the veins of the neck distended, the surface of the body more or less heated, and the pulse frequent and irregular. The abdomen is sometimes swollen, and occasionally, involuntary evacuations take place. The fit may last for only a few moments, or, a succession of fits may continue for hours or days. Upon the subsidence of the fit the child is generally disposed to sleep. In some cases, however, the child is bright and lively immediately after the cessation of the spasms; in others the convulsions go off with vomiting. Occasionally, when the paroxysm is over, it is found that some serious lesion of the brain or spinal marrow has taken place, as shown by partial paralysis, squinting, and various mental disorders; and sometimes the fit is only the commencement of a series of attacks, which eventuate in Epilepsy.

Convulsions sometimes end fatally, though not often, unless connected with other disease; but they always demand prompt and careful attention.

After death from convulsions, there may be nothing discovered in the brain to account for the result; but, in the great majority of fatal cases, congestion, effusion, softening, tumours, or other signs of inflammation or organic affection of the brain or spinal marrow are found to exist.

Some children are much more liable to convulsions than others; those of a sensitive, nervous and irritable temperament being most so. Sometimes a child is supposed to inherit a predisposition from the mother; while, in other cases, all or nearly all the children of a family will be subject to convulsions, when neither of the parents has ever shown any tendency in that direction. Children thus predisposed show themselves more impressible than others from slight causes, are very excitable, if not properly controlled are apt to be fretful or irascible, and sometimes exhibit great precocity. The predisposition to the disease may also be caused by impure air, unwholesome diet, and anything that has a tendency to lower the standard of health.

The immediate or exciting causes are very numerous. Strong and sudden emotion, as fear, anger, surprise, is a frequent cause; excessive artificial heat, exposure to cold, over exertion, and falls or other accidents, may bring on convulsions. One of the most frequent sources is the irritation of teething. Indigestible food is often the cause of convulsions; also acid in the stomach and bowels, and worms. Whatever causes spasms in the intestines may produce convulsions, for nothing more affects the nervous system of the infant than violent pain. One exciting cause is the quality of the milk of the mother or nurse. Many substances taken by the mother will act directly on the child; as, particular kinds of medicines, for instance.

Treatment. As soon as possible after the fit comes on, put the child in a warm bath, up to the neck; (let the water be as hot as the child can comfortably bear) at the same time rags wrung out in cold water may be applied over the head. The child should remain in the bath for ten

or fifteen minutes, then be taken out, wiped dry, and wrapped in warm flannel. The bath may be repeated in a few hours, if necessary. If there is reason to suppose that the fit has been caused by any indigestible substance taken into the stomach, it would be advisable to remove the cause by giving the child a mild emetic of Ipecacuanha; (say one grain for each year of the child's age, repeated in ten or fifteen minutes, if it does not operate). After the stomach is cleared, a *teaspoonful* of the following mixture may be given three times a day (for a child from nine to twelve months old, and in proportion for other ages):—

Carbonate of Magnesia.....	One dram.
Powdered Rhubarb.....	Fifteen grains.
Tincture of Assafetida.....	Half a dram.
Essence of Peppermint.....	One dram.
Syrup.....	Half an ounce.
Water, sufficient to make four ounces.—Mix together.	

Women, in many parts of the country, have a bad habit of suckling their children long after they ought to be weaned, and both mother and children suffer. Usually, the reason for this is, a notion they have that as long as they suckle there is no danger of their again becoming pregnant. Hence, they set at naught the divine command to "increase and multiply," and endeavor to limit the increase of the population. This is generally a mistaken idea. Nine months is the natural time during which the child should suck; after that time the milk of the mother is not proper food for the child; and cannot do it good, while the constant drain weakens the mother.

INFANTILE PNEUMONIA.

(*Inflammation of the Lungs.*)

In this disease, the symptoms at first are somewhat obscure. Children seldom expectorate, or at least they are apt to swallow what they raise from the lungs, so that the secretions are not brought to view; and, although they frequently cry as if in pain, it is difficult to determine where it is situated. Pain, too, is sometimes wanting. Occasionally, however, the disease begins with fever, hard cough, hurried breathing, and pain, indicated by the child crying when it coughs. Sometimes it is difficult to distinguish the symptoms from those of some disease from which the child may be just recovering, as Catarrh, Measles or Whooping Cough. But when the complaint is more advanced, fever sets in, with a very rapid pulse, hurried breathing, flushed face, often great restlessness, and frequent cough. The pulse is seldom under 120, sometimes as high as 140 or 160 in a minute. The breathing is very quick, and varies from 40 to 60, or even more respirations in a minute. If the complaint increases, the powers of the system begin to fail; the cough becomes feeble or quite suppressed; the voice can scarcely be heard; the cries grow faint or cease altogether; the pulse becomes exceedingly small and weak; the respirations irregular and sometimes interrupted, with deep sighing; the extremities become cold; the face pale or livid;

and death soon takes place, usually preceded by a period of drowsiness or stupor. Should the disease, however, take a favourable turn, all the symptoms begin to improve in about a week, more or less, and the child gradually returns to health. Occasionally abscesses are formed, and, discharging suddenly, either produce suffocation, or are followed by purulent expectoration, severe cough, night sweats, hectic fever, and emaciation; until at length the child sinks exhausted, or, as sometimes happens, under judicious treatment, returns gradually to health.

Changes of the weather are among the most common causes of Pneumonia. Sudden exposure to cold, when the body is warm and perspiring, is very apt to produce it. This is especially the case, when the individual exposed is at the time labouring under a catarrhal attack. It is most common towards the end of Winter and the beginning of Spring, and some persons appear to be peculiarly liable to its attacks.

Treatment.—In no disease is it more important to use proper discrimination in the treatment. Measures that are necessary at one stage of the disease, might produce fatal results if adopted at a wrong time. If the disease is taken at the commencement, two or three leeches may be applied to the chest; but, in very young infants, dangerous bleeding has sometimes resulted from the application of leeches, and great care must therefore be taken that the bleeding is not allowed to proceed too far. If leeches are not considered safe, (and, with older children, generally after the leeches,) a small blister may be applied to the chest; the feet and legs may be frequently, (two or three times a day,) put into hot water for ten minutes at a time, and then wrapped up in warm flannel; care being taken that the child is not exposed to cold during the operation. A dose of from half a grain to a grain of Calomel, (according to the age of the child,) may be given two or three times a day; and from half a teaspoonful to a teaspoonful of the following mixture may be given every two or three hours:

Antimonial Wine.....	One Ounce.
Ipecacuanha Wine.....	Three Drains.
Syrup of Poppies.....	Half an Ounce.
Thin Gruel sufficient to make up four ounces.	

If this dose should cause sickness, the quantity may be diminished; but a little feeling of nausea will not be injurious, as long as it does not produce actual vomiting. Should the bowels become confined a small dose of the Cathartic Powder, number Two or Three, (according to the age of the child,) may be given occasionally. The diet must consist of gruel, arrow root, sago, and as the complaint subsides, chicken-broth, veal-broth, rice and bread-puddings may be added.

INFANTILE SPASMS OF THE GLOTTIS.

(Crowing Disease; Inwards Fits; Spasmodic Croup.)

This disease, though similar to croup in some of its symptoms, is essentially distinct in the circumstance that it is purely nervous, and altogether independent of vascular irritation or inflammation of larynx.

The complaint is usually characterized by a shrill sound in drawing in the breath, somewhat like the crowing of a cock, which has given origin to the name of *crowing disease*. The complaint is confined to infancy and very early childhood, occurring at any time from a few days after birth to the end of the third year, but most frequently during teething.

The attack is sudden, and may occur at any time, though it most frequently comes on during sleep, from which the child awakes suddenly with a start. The first symptoms are a struggle for breath, with the head thrown back, the breast elevated, the nostrils expanded, the mouth open; the veins of the neck and head are distended; the countenance flushed, swollen and purplish, or else of a pale cadaverous hue with an expression of anxiety and distress. At length, but occasionally not until symptoms of suffocation appear, the spasm of the glottis somewhat relaxes, and the air rushes in with a shrill whooping sound. The child then usually begins to cry, and, after a short period of hurried breathing, returns to his previous health. Not unfrequently along with the difficulty of inspiration, there is a spasmodic contraction of the fingers and toes, and the paroxysm is sometimes followed by general convulsions. When the attack is over, the child is free from all symptoms of disease of the throat. Occasionally, only a single paroxysm occurs at first, and the disease does not return for weeks. But the interval is often much shorter; and, in bad cases, the attacks take place several times a day, increasing in duration and frequency.

The complaint is usually unattended with cough, fever, or bronchial disease; and thus it may be easily distinguished from Croup.

Though often a trifling disease, it is sometimes very serious. In a few cases the child perishes with suffocation from the severity of the spasm, but in general, the complaint, when alarming, is so, merely as a sign of serious disorder elsewhere. It is often rather a symptom than itself a disease.

The disease appears sometimes to depend upon a general morbid excitability of the nervous system, which is affected by slight causes, such as the sudden contact of cold air, any quick unexpected movement, or mental emotion, especially fright. Hence infants are sometimes attacked with it, when tossed playfully in the air. The act of swallowing occasionally brings on an attack. This state of nervous irritability is most frequently owing to dentition; but it may also be produced by other causes which deteriorate the general health, such as impure and confined air and unwholesome food. Attacks may be brought on by sources of irritation in the intestines, including undigested food, acidity, acrid secretions and worms. It is very apt to attack children brought up by hand. In some instances the disease is dependent on affections of the brain, and hence it has been considered one of the earliest signs of water on the brain.

Treatment.—It is sometimes highly important to relax the spasm of the glottis at the commencement of the paroxysm, so as to prevent suffocation. This may generally be accomplished by dashing cold water upon the face or shoulders, gently slapping the back, blowing into the face, or exposure to a current of cool air at an open window. One of

the best means of preventing a return of the fit is to put the child up to the chin in a warm bath two or three times a day. Inhalation of the vapour of Ether was successful in curing a very bad case, recorded by Mr. Image, of the Suffolk Hospital, England. It was applied by means of a sponge held to the mouth and nostrils, at the commencement of the paroxysm, which was instantly checked; and at length the attacks ceased entirely. The bowels should be carefully attended to, and should be regulated by small doses of Rhubarb and Magnesia, and occasionally, if the motions are of an unhealthy colour, small doses of Mercury and Chalk (*Hydrarg. cum Creta*); for an infant under a year old *one grain* doses may be given. The child should be warmly clothed, and, if not weaned, and the mother's milk is not sufficient, or the mother is not in good health, it should be fed on good cow's milk, thickened with arrow root, ground rice, prepared barley, or corn starch; good bread soaked in chicken, veal or mutton broth will also be good.

WATER ON THE BRAIN.—(*Hydrocephalus.*)

The prominent symptom, and the first usually noticed in this disease, is an enlargement of the head. As the face is in general not enlarged beyond the size of health, the additional size of the forehead and sides of the head becomes still more conspicuous. In some cases the face undergoes a corresponding change, and the whole head appears gigantic. The size which the head is capable of attaining in this complaint is enormous. Thus, Willan speaks of a child two years old, whose head measured twenty-nine inches in circumference; and another of fourteen months measured nearly twenty-three inches. In general, however, the size is much less.

The child walks, if it has begun to walk, with a somewhat tottering or uncertain gait, and not unfrequently falls. He either holds his head stiffly and watchfully erect, so as to prevent its falling on either side, or supports it with his hand, or upon some object in his vicinity. In bed, he usually lies upon his back. The limbs are frequently affected with tremors. There is occasionally pain in the head or limbs, which appears to be paroxysmal, and, when violent, causes the child to scream. The expression of the face is usually sad, sombre, or stupid. The acuteness of the senses is diminished. Dimness of vision occurs, which in some instances increases to blindness, while in others the patient can see to the last. The skin becomes more or less insensible; and the smell and taste are sometimes affected. Hearing is usually the last of the senses to fail. The intellect is seldom much deranged in the earlier stages; though the memory is evidently enfeebled, and not unfrequently a certain dulness of mind is evident. The appetite is sometimes keen, and, unless some other disease complicates the case, the child may even increase in flesh. But more frequently he becomes emaciated, although he may take more than the usual quantity of food. The bowels are generally costive, and the urine scanty. A disposition to copious secretion of tears and saliva have been noticed. At length the symptoms become more violent, and occasional vomiting, contractions

of the limbs, muscular rigidity, squinting, grinding of the teeth, epileptic convulsions, partial Palsy, and mental imbecility, with a disposition to drowsiness or stupor come on. These symptoms are soon followed by complete loss of consciousness, involuntary discharges from the bladder and bowels, a small, feeble, irregular, and frequent pulse, hard breathing, and death soon follows.

The duration of the disease is uncertain. Most of those attacked die in infancy. Some few live on for some years, and occasionally one to adult age.

The quantity of liquid found in the head after death varies much; it may be a few ounces or it may be pounds. Dr. Bright mentions a case in which seven or eight pints were taken from the head of a man who had had the disease from infancy, and who died when near thirty. Water on the brain is a very dangerous complaint, and, although sometimes cured, the chances are very much against the patient.

Treatment. This is one of those cases where the services of a competent professional man should be called in, if possible. Where that cannot be done, care should, in the first place, be directed to the general health of the child; its diet should be light and nourishing, with pure air and warm bathing once at least a day. The head should be kept covered with a woollen cap; the bowels should be kept regular with mild cathartics; and small doses of *Sweet Spirits of Nitre* and *Acetate of Potash* may be given. *Cod liver oil* is also said to have been of service. Benefit is said to have been derived from putting the patient under the influence of mercury; but this should never be risked by the parents themselves. The operation of *tapping* has been often performed with more or less success. In some cases temporary relief had been obtained, in others the operation has appeared to aggravate the symptoms and hasten death, and in others again, though comparatively few, a complete cure has been effected. But the risk is so great that the operation should never be attempted till all other measures have failed.

CROUP.

This is a complaint usually attended with much danger, and which requires such prompt treatment that the parents should never—unless from circumstances absolutely compelled—depend upon their own skill and treatment. In many cases, the success of the treatment and the safety of the patient depend so much upon the promptitude with which the case is treated, that if there is a well qualified medical man within reach he should be at once summoned.

This is a disease almost peculiar to infancy and childhood; it commences variously. Not unfrequently the child is affected for some time with the symptoms of common Catarrh, and perhaps fever, before those peculiar to Croup are developed. Very often a croupy cough and some hoarseness precede the attack for some hours or even days; and this state of things, though always suspicious, sometimes passes away spontaneously, without the occurrence of the fully formed disease. Often these symptoms have continued for a longer or shorter time, or, some-

times without warning of any kind, the child is attacked with a paroxysm of coughing and shortness of breath. In the majority of cases this occurs in the night, and more frequently in the early part of it than towards morning. The paroxysm differs greatly in severity in different cases, sometimes being slight, and at other times violent and alarming.

The child usually starts out of sleep with a peculiar, dry, sonorous, ringing cough, sounding, according to Cheyne, as though it came through a brassen trumpet; but, in fact, comparable to nothing else in nature, and to be appreciated only by being heard. When once heard it will always afterwards be remembered and easily recognized. So characteristic is it of this disease that, when met with in other affections, as sometimes happens, it is called the *croupy* cough.

If the child attempts to speak, the voice is usually more or less rough and hoarse, though very rarely quite extinct or whispering. The distress of the child during the paroxysm is often very great; he sits up or tosses himself about in bed, supports himself on his hands and knees, or lies on his back with his head extended; puts his hands to his throat as if to remove some difficulty there, or holds them out imploringly for aid from his attendants; and, as if conscious of threatened suffocation, has upon his countenance an alarmed and anxious expression. Sometimes, when able to speak, he complains of pain or tightness in his throat; but his voice and his piteous attempts to cry are often stifled by the cough, and increase the violence of the paroxysm. At first, the countenance is usually flushed, the skin warm and the pulse frequent; but, unless the paroxysm subsides, especially when it is very severe, the effects of the impeded respiration soon begin to show themselves. The lips assume a purplish or livid hue, the face becomes pale, the extremities cool, the pulse very frequent, feeble and irregular, and a condition takes place approaching to asphyxia, during which the spasm relaxes, and the air is again allowed to enter the lungs more freely. The violent symptoms are now moderated and the paroxysm gradually subsides, so that the child falls to sleep, and upon awaking is found to be greatly relieved. In some extraordinary cases, complete and fatal asphyxia may take place before the spontaneous subsidence of the paroxysm.

There is, however, a worse form of the disease than this, in which a *lining* or *false* membrane is formed in the inside of the windpipe which gradually chokes the patient. In this case the symptoms of the last stage occasionally come on very early, even within twenty-four hours from the commencement of the attack. More frequently, however, they are postponed for three or four days, and sometimes considerably longer. This stage is characterised by excessive difficulty of respiration. With complete suppression of the voice, and a tight and dry cough, the inspiration is wheezing and sonorous, so that it may be heard at a considerable distance. The child uses his utmost efforts to expand the chest, and the respiratory muscles are thrown into almost convulsive action. The shoulders rise, the breast heaves, the nostrils expand and contract, the head is thrown backward. The force of the respiratory effort is sometimes so great as to rupture the air-cells of the lungs, and even to make a rent between the rings of the windpipe. The child appears in an

agony of distress. He throws himself about in bed, or jumps up and runs to the window for air, his face bearing meanwhile a most anxious, alarmed, and imploring expression. At length, the powers of the system fail, the pulse becomes exceedingly quick and feeble, the skin cool and bathed in sweat, the cheeks pale and cold, the lips livid. The brain and heart cease to act, and the patient sinks gradually and quietly away, or the nervous system rouses itself for a last struggle, and death takes place in the midst of convulsions. Not unfrequently, however, the patient is cut off at an earlier stage by suffocation in one of the paroxysms. Instances of recovery from the last stage are very rare. The duration of the disease varies from less than a day to one or two weeks.

The most common cause of the disease, in all its forms, is cold, or cold combined with dampness. The disease is said to prevail most in moist places. It is frequently brought on by the sudden passage from hot to cold air, and in infants, is probably often produced by sleeping in very cold chambers, after having been all day in hot rooms. Irritating substances inhaled into the lungs have sometimes caused it.

The disease is not positively confined to any period of life, but it is exceedingly rare in adults, and is seldom seen in very early infancy. From one to seven years is the age at which it is most prevalent, although cases are not very uncommon at any period before puberty. The disease sometimes appears to run in families, and males seem more liable to it than females. Vigorous and fleshy children, with rosy complexions, are said to be most frequently affected.

Treatment.—The treatment must be prompt. As quickly as possible get water heated, and put the child into a bath, as hot as it can bear it, up to the neck; keep it in for ten or fifteen minutes, then wrap it up in warm flannel. While the water is heating, give the child an emetic. (There are certain things that every family should keep in the house, and *Powdered Ipecacuanha* or *Ipecacuanha Wine* and *Antimonial Wine* are two of them). If the child is young, say two or three years old, a teaspoonful of *Ipecacuanha Wine* or *Antimonial Wine* may be given it every ten minutes till it begins to retch, and then it may drink a little lukewarm water occasionally till the vomiting is free. If attended to in time, these means will generally give relief, and all that will be necessary afterwards will be to repeat the warm bath occasionally, guarding carefully against cold, and a dose or two of *Castor Oil* or *Senna Tea*. When *Ipecacuanha* or *Antimonial Wine* is not obtainable, thin *mustard* will act as a substitute; it may be worked off, like the other emetics, with warm water, but it is rather too rough an emetic for a young child. If the warm bath and the emetics do not at once moderate the symptoms, it is best to send without delay for medical advice.

INFANTILE REMITTENT FEVER.

Children, from two to eight years old, are most liable to this complaint. Sometimes it is occasioned by improper diet, sometimes by exposure to heat, cold, or damp. It generally comes on with a little shivering, followed by heat and feverishness, frequently a little head-

ache, and coldness of the feet and legs. The child has probably been playing out of doors when first attacked, and thus nothing is noticed to be the matter till the fever has become established. When first noticed, the child will be found to have a hot skin, a quick pulse, a dry and furred tongue, quick breathing, no appetite, considerable thirst, sometimes retching or vomiting, and the bowels are generally confined. If able to make himself understood, the child frequently complains of pain in the head, but if otherwise, is restless and uneasy, or, if quiet, is heavy and disposed to sleep. During sleep, the child will frequently start and twitch the muscles, and occasionally will be convulsed. After a few hours, the violence of the symptoms abates; and on the following morning, the child is found with a cooler skin, a slower pulse, a moister mouth, and a brighter and more lively expression. As the day advances, the fever again rises with similar symptoms as at first, and thus the disease continues till its close. In some cases, however, the morning improvement is much less decided than in others, and occasionally it is difficult to decide at what period of the twenty-four hours the feverish symptoms are most violent. The bowels are generally confined, and the motions have usually an unhealthy appearance and smell, being clay-coloured, dark, or greenish, with an offensive smell. The urine is generally scanty, and the breath frequently sour. The child is often light-headed, but more frequently there is drowsiness, sometimes even amounting to stupor. Sometimes the child picks its lips and nostrils, and also picks at the bedclothes.

The disease runs on from five to ten days, but is occasionally protracted for one or even two weeks, but in these cases, the complaint is frequently accompanied with inflammation within the abdomen. Where the complaint is simply fever, without any complication from inflammation, there is no danger, and the child always—with proper treatment—recovers; the attacks of fever gradually become shorter and milder; purgative medicines operate more readily, and bring away more healthy discharges; the urine becomes more plentiful; the heat of the skin and the frequency of the pulse diminish; the tongue becomes cleaner; the appetite returns, and the health is gradually restored. When, however, the bowels become swollen and tender upon pressure, accompanied with diarrhoea, and less decided abatements of fever, there is reason to fear danger from inflammation; and proper medical advice should be at once obtained. Some authors attribute this complaint to worms, and there is no doubt that they are sometimes the cause of it.

In ordinary cases, if the symptoms are mild, a few doses of opening medicine (a little *Magnesia* and *Rhubarb*, or *Magnesia* and *Senna Tea*) with attention to diet, confining the child to oatmeal gruel, sago, tapioca, arrow root, and ground rice, and keeping the child in bed, will generally effect a cure; but when the symptoms are more severe, with much fever and restlessness, with confined bowels, it is better to give a dose of *Calomel* (from one to two years old, a dose of from one to two grains, and from three to five years old, a dose of three grains) in a little jelly, honey, or sugar, followed about six or eight hours afterwards, by a small dose of *Rhubarb* and *Magnesia*, or *Magnesia* and *Senna*. The diet pre-

scribed above may be adopted and continued, with occasional doses of opening medicine, if the bowels are at all confined. Considerable benefit will be found from small doses of antimonial wine; say for a child of two years old, *five drops of Antimonial Wine* three times a day in a little gruel. It is not intended to produce sickness; therefore, if that should be the result, the dose must be diminished. The child should be kept in bed, and an occasional warm bath will be of benefit. Sourness, at the stomach will be best counteracted by a little magnesia. Should the abdomen be tender on pressure, frequent fomentation, with soft flannel wrung out in hot water, as hot as can be comfortably borne, will give relief. The nurse, however, must recollect that the skin of a young child is tender, and will not bear the same degree of heat as the skin of a grown person.

As the child improves, chicken broth, veal broth, mutton broth, and beef tea may be given. Milk, when good, is a good diet, combined with oatmeal porridge or good brown bread, but when there is acidity in the stomach, milk is apt to disagree, and to become curdled. Care should be taken to give nothing that can irritate the stomach and bowels. When the child is thirsty, cold water may be given frequently, and it is generally refreshing to the patient.

When the patient is recovering, and beginning to get an appetite, care must be taken not to let it have such food as would be likely to lie heavy on the stomach; nothing in fact that is difficult of digestion.

WHOOPIING COUGH.

Whooping cough, sometimes called *chin cough*, when well established, cannot readily be mistaken. The force of the disease varies much, even in its simplest form. In some instances, it is so slight that it can scarcely be determined after recovery, whether the child has had whooping cough or not. In others, again, it is very severe, with frequent and violent paroxysms, which seem to threaten suffocation. By the pressure upon the brain, fatal convulsions are sometimes brought on, and death may also take place from asphyxia during the paroxysm. In protracted cases, great emaciation and debility sometimes ensue, and the patient may die of exhaustion. But these fatal terminations are comparatively rare; and most of these children, said to die of whooping cough, generally die of a complication of whooping cough with croup, or with bronchial inflammation, or inflammation of some portion of the bowels. Whooping cough is of a spasmodic nature; it is one of those complaints that usually attack a person but once in a lifetime. It is very apt to prevail as an epidemic, and by some persons is thought to be contagious, but I am not by any means convinced of the correctness of this opinion. Persons advanced in life are sometimes attacked with it, and Dr. Watson mentions a case in which a child was born with it. There is no doubt the cause of the complaint must be sought in the condition of the atmosphere.

Treatment.—In the early stage, if the cough is moderate, we may commence by giving a mild purgative as *Castor Oil, Magnesia, Turbith*

of Soda, or Epsom Salt, according to the age of the child. This may be followed by a dose of the following mixture:—

Ipecacuanha Wine.....	Two Drams.
Antimonial Wine.....	Two Drams.
Orymel of Squills.....	Half an Ounce.
Paregoric.....	Two Drams.
Water.....	Three Ounces.

Ten drops of this may be given for each year of the child's age, three or four times a day; for instance, if the child is three years old, it may take 30 drops, and if six years old, 60 drops for a dose. If the child is feverish, a teaspoonful of the *Fever Mixture*, No. 9, may be added to each dose. Sometimes considerable relief will be derived from applying a warm plaister (Burgundy Pitch) to the chest or back; bathing the feet and legs in hot water night and morning will be beneficial; and the body, and feet and legs in particular, should be warmly clad. Where there is much restlessness at night, *Hyoscyamus* (Henbane) will be useful. A child of five years old might take *one grain* of Extract of Henbane, combined with *one grain* of powdered Squill. Sometimes a drink of cold water, or the sucking a small piece of ice tied up in a piece of muslin, will give relief from the spasm. The diet should be light and nourishing, consisting of gruel, sago, arrow root, jelly, ground rice, with chicken broth; and, as the patient progresses towards recovery, a little chicken or boiled mutton will be beneficial. In many cases, where the cough seems to linger on long after all inflammatory symptoms have disappeared, and medicine seems to have no further effect, a removal to a higher and drier locality, and a purer air, will frequently work wonders, and cause a rapid recovery. In fact, a change of air seems sometimes absolutely necessary to obtain a cure.

Bessine, a substance contained in the purifying chambers of gas works, if placed in small quantities in the room or bed of a child suffering from whooping cough, produces exactly the same smell as is observed in gas works, and has the effect of relieving the distressing symptoms, sometimes rapidly. Dr. Lochner tried the plan on his own child, and he states that the disease itself only lasted six days.

WORMS.

Five species of worms inhabit the human body—the round worm, the thread worm, the long thread worm, the common tape worm, and the broad tape worm.

The round worm very much resembles the common earth-worm. The thread worm resembles small pieces of thread, from which it has derived its name. The long thread worm is an inch or two in length, and consists of two distinct portions; one of which, constituting two-thirds of the whole length of the animal, is scarcely thicker than a horsehair; the other and shorter portion is very much thicker. The long tape worm varies from five or ten feet long to as much as sixty feet long, and, it is said, has even reached a hundred feet. The broad tape worm is, as its

name implies, broader than the long tape worm. The *round worm*, *thread worm*, and *long thread worm* have the separate sexes in different individuals, but the *laps worms* have only one sex, or both sexes in one individual.

Worms in the alimentary canal frequently produce great disturbance in the system, uneasiness or pain in the stomach and bowels, sometimes gnawing or biting, and sometimes indescribable, yet very distressing. Sometimes a sense of itching at the fundament and at the nostrils. The bowels are often disordered, sometimes confined, at other times relaxed, with mucous or bloody discharges, as in dysentery. The mucus is sometimes in shreds or flakes, which are not unfrequently mistaken for fragments of partially digested worms. Frequently portions of undigested food will pass with the motions. The appetite is very uncertain; in some cases natural, in others poor, craving, or depraved. The belly is often swollen, hard and tympanitic, the breath unpleasant, and the tongue furred, with a disagreeable taste in the mouth. Swelling of the upper lip, bleeding from the nostrils, and grinding of the teeth during sleep are frequent symptoms.

But the effects of worms are not confined to the alimentary canal; various derangements of health are experienced in consequence either of the direct irritation of the worms, or of the disordered digestion which they occasion. Among the most common of these are nervous affections, such as fretfulness, irritability of temper, wakefulness or drowsiness, disturbed sleep, sudden starting out of sleep as if from fright, giddiness, headache, spasmodic movements of the eyelids, impaired vision, singing in the ears, and partial deafness. Convulsions are not unfrequent in children, and symptoms strongly resembling those of water on the brain have been ascribed to worms, and have ceased on their removal. In addition to these symptoms, obstinate cough, shortness of breath, palpitations, hysteria, and a general disturbance of the system, marked by a languid circulation, sallow skin, sunken eyes, dark circles around the eyelids, and general emaciation. Persons in apparently perfect health are occasionally affected with worms, which give no signs of their existence until they are observed in the ordinary passages, or are expelled during some acute attack of disease, either by the medicines employed, or the influence of the disease itself; and it is no uncommon event to find worms in the bodies of individuals after death, who have shown no signs of them during life. Hence, some persons have inferred that they are generally, if not always harmless, and some have even gone so far as to contend that they perform a useful office, being intended as scavengers to clear off the noxious matters contained in the bowels. But these opinions are opposed to general experience.

Worms are very seldom fatal. It has been supposed that worms are capable of piercing the intestines, and a case is on record in which a portion of the gut had been pierced in numerous places by the *long thread worm*. In most cases, however, in which worms have been found in the cavity of the abdomen, they are supposed to have escaped through holes in the stomach, which may have been produced by the action of the gastric juice after death.

The cause of the presence of worms in the alimentary canal has been a matter of dispute. Their growth is evidently favoured by an unhealthy condition of the stomach and bowels, and particularly by a feeble or disordered state of digestion. Hence persons of sedentary habits, of scrofulous tendency, and of general bad health, are apt to be affected with them. It is supposed that over-loading the stomach beyond the powers of digestion is favourable to their growth. The use of unripe fruits and raw vegetables, and indigestible substances generally, predisposes to worms, as well as bad bread, spoiled cheese and meats, the flesh of diseased animals, and the use of bad water. It has been observed that they are most abundant in moist countries, and during a long prevalence of warm, damp weather. Children, after weaning, and up to or about the age of puberty, are more frequently afflicted with worms than either very young infants or adults, probably owing to the nature of their diet.

Treatment.—In treating a patient afflicted with worms, we have two objects in view—first to get rid of the worms already in possession, and, secondly, to prevent the occupation of the bowels by a fresh crop. In the first place, in order to dislodge the worms, we may give a dose of *India Pink* and *Senna Tea* (the former is commonly called *Pink Root*, but, in reality, the whole plant is used) mixed together; this may be given in the morning *before breakfast*, and repeated every second morning for two or three times. In most cases, these will be sufficient. Where an additional anthelmintic is required, turpentine has been found very efficacious.

To prevent a reproduction of the worms, when the canal is once cleared of them, it is necessary to attend to the food and drink of the patient; and, if the digestion is feeble, to assist it by means of tonic medicines, and suitable food and exercise. Indigestible substances, and unwholesome food of all kinds, and bad water, are to be avoided. As tonics, *Infusion of Gentian*, *Cascarilla* or *Colomba*, or of all these combined, with the addition of *Bitter Orange Peel* and a little sugar, will be a useful preparation, or the patient may take the *Tonic Mixture, No. 11. Acetate of Iron*, with *Infusion of Peruvian Bark*, will also be useful. It is well to add half a teaspoonful of bruised Caraway Seeds to the Senna and Pink Root to prevent griping. A little *Milk of Sulphur*, taken every morning fasting for three or four mornings, is said to be very useful as a remedy for the thread worm. The long thread worm was formerly supposed to be very rare, but this has been since found to be a mistake; the fact being that, on account of its small size, it was frequently overlooked. It is stated that in the London Hospital during one winter, this worm was found in almost all the bodies carefully examined, both of persons destroyed by injuries, and of those who died of disease.

The *broad tape worm* is said to be found only amongst the inhabitants of Switzerland, Poland, and Russia, or in persons who have been in those countries; the *common tape worm* is met with everywhere. They occur in childhood, but more frequently after puberty, and are very rare in old age. Females are more subject to them than males. They

are not very common in Canada. Tape worms often exist in large and tangled bunches, so as to interfere mechanically with the proper performance of the actions of the intestines. It is said that the tape worms cannot propagate in the human intestines through their eggs, and require to be transplanted to another animal, in order to become reproductive; so that, if the worm can be wholly expelled, there is no danger of an increase from its eggs deposited in the bowels.

In some cases, the tape worm has long existed in the bowels without producing any prominent symptoms; but it generally occasions great discomfort, and sometimes materially damages the health. Professor Wawruch, of Vienna, who, during a period of twenty years, had witnessed 206 cases of tape worm, gives the following account of the symptoms:—Dull pain in the forehead; giddiness; buzzing in the ears; dullness of the eyes, which are surrounded by dark circles; swelling of the eyelids; dilated pupils; frequent spasmodic movements of the eyes; alternate paleness and flushing of the face; paleness of the lips; peculiar movements of the nose and mouth; emaciation; alternate loss and excess of appetite; cravings for particular articles of food; offensive breath; furred tongue; grinding of the teeth, especially during sleep; swelling of the belly; shooting pains; a feeling in the morning as of a foreign body moving in the bowels; melioration of all the symptoms under the use of farinaceous food, hot bread, and coffee. The most certain sign is the discharge of joints of the worm, which are either passed alone or with the stools. These joints usually exhibit signs of life when they first appear.

Tape worms have the power of retaining their place very tenaciously in the bowels, possibly in consequence of holding on to the mucous coat by means of suction. They often continue for years to harass the patient, who passes from time to time separated joints, or even large portions of the worm, without getting entirely rid of the troublesome animal. The duration of the affection, according to the observations of Wawruch, varies from a few months to thirty-five years. It is considered important that the head of the worm should be expelled, as until this happens, there is no certainty that the evil has ceased. Whatever method of cure is followed, much pain is often experienced by the patient just before the expulsion of the worm, which is ascribed to the violent movements of the animal under the influence of the medicine. It is deemed best to prepare the patient by a somewhat restricted diet upon the day preceding the use of the medicine, which should be given in the morning upon an empty stomach.

The medicine most relied on for the cure of tape worm is oil of turpentine. Some practitioners have given it in very large doses—from half a fluid ounce to two fluid ounces, followed in two or three hours by a full dose of castor oil. Dr. Know, who had the opportunity of treating numerous cases of tape worm among the British troops at the Cape of Good Hope, states that such large doses of turpentine are not necessary. He found that a dram or two of the oil, given with a little water, morning and evening, for three days successively, was generally sufficient to destroy the worm, even in the most obstinate cases, and without the

use of purgatives, though it was considered advisable to give a little castor oil each day about noon.

Castor oil, although a useful and very valuable medicine, is one that many people have a great dislike to. By mixing castor oil with the yolk of a fresh egg—say the yolk of one egg to an ounce of oil—it may be afterwards mixed with water to any extent desired; the addition of a little sugar and a little grated nutmeg will make a mixture so pleasant that no child will object to it.

MEASLES.

This is a contagious disease, characterised usually by fever, cough, and a rash upon the skin. The disease commences with feelings of lassitude, chilliness, aching in the limbs, followed by a frequent pulse, heat and dryness of the skin, headache, redness of the eyes, loss of appetite, furred tongue, sore throat, sneezing and discharge of tears, huskiness of voice, cough, and sometimes tightness of the chest and shortness of the breath. In some cases, pains in the stomach, nausea, and vomiting. In young children, convulsions are not unfrequent, particularly during the time of teething. There is considerable variety in the violence of the disease, and in the number of the symptoms. Occasionally there are nothing more than the ordinary symptoms of moderate catarrh, with little or no fever; while in other cases the fever is high, and there are symptoms of bronchial or pulmonary disease. The symptoms usually increase in severity for two or three days, till about the third or fourth day the rash appears. Sometimes, however, the rash is considerably longer before it makes its appearance.

The rash usually appears first upon the face and neck, then upon the body, and lastly upon the limbs; sometimes, however, it appears upon the body or limbs first. When at its height, which is usually upon the second or third day of the eruption, there is frequently a troublesome itching and heat of skin. Sometimes the cough begins to abate on the appearance of the rash; occasionally the voice will be quite lost for two or three days, and the patient can only speak in a whisper. About the eighth day of the disease, or the fourth of the eruption, the symptoms begin to decline. In some cases, however, the whole duration of the eruption does not exceed a day or two, and in others it lasts for a week or more. The red colour of the eruption gradually gives way to a dirty yellowish hue, and the eruption dries up, and separates in fine scurfy scales. The falling off of the scales is usually attended with a little itching.

Occasionally, instead of the symptoms diminishing at this stage, there is strong evidence of inflammation of the bronchial tubes or of the lungs. This is the greatest danger of measles, and most frequently arises from bad nursing, the patient having been carelessly exposed to cold. Instead of inflammation of the chest, diarrhoea not unfrequently sets in, which, when moderate, is sometimes a favourable sign, but it is sometimes obstinate and troublesome. Sometimes exposure to cold will drive in the rash, and the consequences are apt to be pains in the

bowels, diarrhoea, shortness of breath, drowsiness, convulsions, or signs of great prostration.

Measles occasionally appear of a malignant character. Cases of this kind may sometimes arise from a depraved state of the constitution, with a strong predisposition to the typhoid condition, or the accidental conjunction of some powerfully depressing cause, with the specific cause of the measles. But more frequently they are the result of peculiarity in the cause of the disease. There is usually a greater frequency and feebleness of the pulse, the breath is more affected, with a greater tendency to delirium, stupor, or other nervous disorder. The eruption is apt to be irregular and partial, appearing and then disappearing; and the rash is often of a livid, purplish, or blackish colour. The abdomen and brain are affected as in malignant typhus, and the contents of the chest are similarly attacked. When the patient survives the immediate danger from syncope, coma, or asphyxia; he is still liable to be carried off by the exhausting diarrhoea, or obstinate bronchial disease which remains. In consequence of the dark colour of the rash, this variety of measles has been called *black measles*. This state of the disease is fortunately rare.

But measles are liable to be complicated with other complaints, and many fatal cases occur in consequence. Among these may be mentioned inflammation of the bronchial tubes, of the lungs, or of the bowels. Sometimes measles occurs at the same time with scarlet fever.

Measles occasionally has the effect of relieving or permanently displacing other diseases. It is, however, much more apt to leave other disorders behind it. One of the most common of these is chronic inflammation of the air passages, with hoarseness; obstinate inflammation of the eyelids, inflammation and suppuration of the ears, swelling of the glands of the throat, boils in different parts of the body, and chronic diarrhoea are not uncommon. Measles is also well known to favour the development of tubercles and scrofulous swellings in those predisposed to them.

Measles occurs at all seasons of the year, but more frequently in cold weather. The disease is more common with children than with adults, although all ages are liable to be attacked, but it is one of those diseases that are seldom taken more than once.

This is one of those complaints in which much depends upon good nursing. The patient does not require to be kept hot, but always comfortably warm. Where there is so much risk of taking cold, and where the consequences are apt to be so severe, the patient,—particularly if a child, should be kept in bed, and carefully watched. The mother or nurse should bear in mind that "prevention is better than cure." Measures without cough may sometimes easily be mistaken for Scarlet fever; and Scarlet fever accidentally associated with Cough has been taken for Measles.

Treatment.—At the commencement, a mild aperient may be given, consisting of Rhubarb and Magnesia, or Senna Tea, or Tartarized Soda, with a little Ginger to prevent griping. Soothing drinks, such as Gruel, Barley-Water, Linseed Tea. If the cough is troublesome, the same mix-

ture recommended under the head of "Whooping Cough" may be given, or the following: Take a new-laid egg, place it in a tea-cup, cover it with lemon juice (squeeze a lemon over it), let it stand till the shell is dissolved; add an ounce of Honey, and beat the whole up together. *A quarter of an ounce of Ipecacuanha Wine and half an ounce of Paregoric* may be added. A teaspoonful may be taken for a dose for a child of six or eight years old, and smaller doses for those of younger ages. Or the patient may take the *Cough Mixture No. 10*. As the patient progresses towards recovery, he may take Bread Puddings, Rice, Sago, Chicken Broth, followed by boiled Chicken and boiled Mutton. Benefit may frequently be derived from bathing the patient's feet in hot water, but they must be rubbed dry afterwards, and wrapped up in warm flannel, or covered with warm woollen socks.

Attempts have been made to produce a mild form of Measles by means of inoculation, in the same way as, before the discovery of cow-pox, people used to inoculate for small-pox. We are told of an instance in which the operation was performed in eleven hundred and twenty-two cases, and failed only in seven cases out of a hundred. The disease that resulted was mild, and in no case fatal. On the seventh day after inoculation, the fever appeared, on the ninth or tenth the eruption, on the fourteenth the skin began to peel, and on the seventeenth, the patient was quite well.

SCARLET FEVER.

Scarlet Fever was long confounded with Measles, and, even when found to be a distinct disease, was believed to be merely a variety of Measles. Dr. Withering has the credit amongst British physicians of being the first who clearly and fully pointed out the difference between the two diseases. Most authors describe three varieties of Scarlet Fever, the *simple*, the *anginose*, and the *malignant*. But the fact is, that though cases are not unfrequently observed in which the characters of each variety are tolerably well marked, yet it very often happens that they are blended together, so that it would be quite impossible to determine to which of them a particular case might belong. The disease is essentially the same in all its varieties, and produced by the same cause.

Scarlet Fever is highly contagious, and, when severe, is a most dangerous disease. It usually commences with headache, sore throat, redness of the eyes, sometimes with a feeling of languor and weariness, with frequent pulse, hot, dry skin, followed by thirst. Sometimes; also, at the commencement, there are nausea and vomiting. In different cases there is every variety in the severity of the symptoms, from a mildness hardly amounting to disease, to the highest point of danger. On examining the throat in most cases, it will be found inflamed, and frequently swollen, and the tongue is also frequently red and inflamed. The rash makes its appearance usually on the second day of the fever, but sometimes it is the first symptom noticed. It generally appears first upon the neck, face and breast, and from thence it spreads over the whole body.

The fever does not abate upon the appearance of the rash, but con-

tinues with various degrees of violence throughout its progress. The pulse is usually very frequent, much more so than in febrile diseases generally of the same degree of violence. It is often 120 or 130 in a minute, and sometimes more frequent still. The skin is burning hot. The bowels are frequently confined, but sometimes diarrhoea occurs in the advanced stage. Sometimes, also, the stomach is irritable, but this is not a common symptom.

The affection of the throat, in some cases, never exceeds that already noticed as occurring before the appearance of the eruption, but very often it becomes the most prominent and distressing symptom, being attended with swelling within and without, painful swallowing, and sometimes shortness of breath. The complaint usually attains its height from the fifth to the ninth day, when, in favorable cases, all the symptoms begin to decline. The rash fades, the heat of the skin diminishes, the pulse becomes slower and fuller, the soreness of the throat abates, and the tongue becomes clean, frequently, however, remaining reddish for a time. Sometimes the amendment is accompanied by a profuse perspiration, or by diarrhoea, but both of these are frequently absent. But the course of the complaint is often much less favourable. From the beginning to the close it is not free from danger. Death sometimes takes place in the first stage, from the overwhelming force of the shock upon the nervous system, and at any subsequent period, the patient is liable to the same result from coma or other cerebral affection. Inflammation occasionally attacks some vital part, especially one of the serous membranes, with fatal effect. Disease of the stomach and bowels sometimes carries off the patient, and sometimes affections of the throat have been the cause of death. The patient may also sink from debility consequent upon the malignant character of the disease, or the occurrence of gangrene of the throat. Even after the patient has seemed to recover completely from the complaint, when the only symptom remaining is a little weakness, the feet will sometimes suddenly begin to swell, general drowsy will rapidly set in, and in forty-eight hours the case will frequently terminate fatally.

It is certain that cases of fever with sore throat sometimes occur during the prevalence of Scarlet Fever, having all the symptoms, and running the exact course of that disease, with the single exception that the eruption is wanting. It is even stated that such cases are capable of imparting Scarlet Fever.

Few diseases leave a longer train of evils behind them than Scarlet Fever. Among the most common and troublesome, are the abscesses which form in the vicinity of the glands of the throat and at the angles of the jaws; sometimes the discharge of pus from these sources is more than the weakened system of the patient can bear, and, after having survived the fever, he dies of hectic. At the best, they greatly protract convalescence, and the constitution is long in recovering its usual strength.

Damp, badly drained neighbourhoods are those generally in which the worst cases of Scarlet Fever are found. The disease attacks all ages, but young people are most liable to suffer. As a general rule, a person

only takes the disease once in his lifetime, although in rare instances, it may be otherwise. There is no complaint in which the result is more uncertain than in this. Cases apparently of the mildest character sometimes assume a most malignant appearance, and patients die suddenly when supposed to be quite free from danger; while, on the other hand, cases apparently desperate sometimes end favourably. The disease is generally dangerous in pregnancy.

Treatment.—If there is much pain in the head and throbbing of the temples, with sore throat, great relief will be derived from putting a few leeches on each temple, and also on the throat, the number to be regulated by the intensity of the complaint and the age of the patient. This may be followed by a mild aperient, and the patient had better go to bed. If in winter or cold weather, a little fire may be kept in the room; to cause a draught, and keep the air purified; if in warm weather the window may be kept open. The patient should only be lightly covered with bedclothes, and should be sponged, several times a day, with vinegar and water; one part of vinegar to eight or ten of water. Rags dipped in the same may be laid over the forehead and head, and changed frequently. If the patient is feverish, cooling drinks of barley-water, flavoured with a little lemon, will be relished; and the following mixture may be taken: say two tablespoonfuls every three or four hours; *Diluted Sulphuric Acid, one dram; Sugar, one ounce; Infusion of Roses, half-a-pint.* Should it not be convenient to get the *Roses*, the acid may be given in *Mint Tea*.

Should the throat be troublesome, the following gargle may be used: *Infusion of Roses or Mint Tea, half-a-pint, Nitre, two drams; or, Sage Tea, half-a-pint, Nitre, two drams.* The throat may be gargled several times a day, if necessary. Some persons are fond of giving emetics on all occasions, and at all times and seasons. Sometimes they are useful, but as they reverse the natural action of the stomach, the less they are indulged in the better. It is usually better when there is any nausea at the stomach, to take frequent small effervescing draughts (say ten grains of *Carbonate of Soda* and six grains of *Tartaric Acid*, dissolved in half a wineglassful of water), which will soon settle the stomach. The bowels should be kept gently open when required.

The Diet, if the patient is feverish, should consist of oatmeal gruel, barley-water, rice, rice, corn starch, and bread puddings. As the patient improves, chicken and mutton broth may be added, changing gradually to beef tea, boiled chicken, and boiled mutton.

NETTLE RASH.

This is a non-contagious affection; called the *Nettle Rash*, from the reddish patches of swelling which mark the disease, resembling those produced by the sting of nettles. There is usually a state of feverish excitement in the system a day or two before the rash appears, which subsides on the appearance of the rash. Being attended with excessive itching, it causes the patient to rub or scratch the skin, and thus very much to increase the eruption, which will often, under this kind of irri-

ation, extend itself far beyond its original boundaries. It may attack any part of the body, but is most common upon the inside of the fore-arms, and about the shoulders, loins and thighs; sometimes it makes its appearance first on the body, and sometimes, but not often, attacks the face. The eruption is not constant, but comes and goes irregularly, generally being worst at night. The swellings sometimes last only a few minutes, at other times for several hours, and on disappearing in one place, often return in another.

In many cases, the eruption makes its appearance without previous fever; especially when the disease proceeds from something taken into the stomach. In such cases, an hour or two after the substance has been swallowed, pain in the stomach, with nausea, anxiety, and headache come on; and are soon followed by the eruption, which is sometimes very violent. The face, neck, and chest, sometimes even the whole surface of the body, are much swollen, with considerable redness, interrupted here and there by single or clustered swellings. There is heat, itching, and tingling of the skin, and oppressed breathing, which sometimes almost threatens suffocation. This state usually only continues for a few hours, after which the complaint gradually subsides, and terminates usually in one or two days. In some cases there is only redness of the skin without the wheals. In these cases, the symptoms usually disappear very soon after the stomach has been completely evacuated by means of an emetic.

Occasionally *acute* Nettle Rash assumes a decidedly intermittent character, occurring in regular paroxysms every day, or every other-day, either as an attendant on intermittent fever, or as an original affection.

In the *chronic* form there is no fever, and the eruption is not constant, but appears and disappears irregularly; being sometimes absent for a considerable period, and returning from slight causes, as violent exercise, or indulgence at the table. The wheals are usually whitish, and less apt than in the acute form to be surrounded by a red efflorescence, though attended with the stinging, itching, and tingling sensations characteristic of the disease. The duration of the complaint is very uncertain, sometimes not exceeding a few days, and sometimes lasting for months or years.

Occasionally the wheals increase rapidly, and attain a considerable magnitude, forming tumours in the loins, limbs, &c., sometimes as broad as the hand, and interfering with movement. These tumours are sometimes hot, tender and painful, occur usually at night, and subside after continuing a few hours, leaving behind them sensations as if the patient had been bruised or fatigued. In other cases, the wheals, instead of lasting only a few hours or a day, remain for two or three weeks after the redness has disappeared, retaining more or less of their characteristic sensation, and, at length, gradually subside. In one variety of the complaint, the patient suffers much from severe stinging pains as if needles were run into the skin, without any appearance of rash, except an occasional eruption of wheals, which continue for two or three days, and then disappear, without any relief to the unpleasant sensations.

The Nettle Rash, though a very disagreeable and often, troublesome

complaint, is scarcely ever dangerous. Cases of death have been recorded, when the disease has arisen from substances taken into the stomach; but, in these cases, the rash is only an outward symptom of the disturbance within.

The most frequent causes of the Nettle Rash are internal irritations, especially of the stomach and bowels. It often accompanies teething and the bowel complaints of children. Acids and other irritating matters in the stomach frequently occasion it. Certain kinds of food have been long known to produce it in particular constitutions; such as lobsters, crabs, shrimps, and more especially muscles. Salt and smoked fish have been accused by some writers; and it seems that fish are more poisonous at some seasons than at others, and that some parts of fish are worse than other parts. Pork, mushrooms, honey, oatmeal, bitter almonds, and green cucumbers have also been accused. One American author states the worst case of Nettle Rash he ever saw, occurred in a woman from eating raspberries. He says, "She had been twice before attacked in the same manner, from the same cause. The face, neck, and extremities, were greatly swollen, and the respiration in the highest degree embarrassed; but immediate relief was obtained by an emetic of *Ipecacuanha*." In this case probably the patient had partaken immoderately of the raspberries, or else she was peculiarly susceptible to their influence. (I once knew a lady who could not enter a room containing *sweet peas* without fainting. It was not necessary that she should see them, the smell was sufficient.) Certain medicines also occasionally produce it, among which are Valerian, *Copaiba*, and Turpentine. This susceptibility to particular kinds of food is not general, but confined to individuals; the food that will produce it in one person will not generally produce it in another, each person being liable to be affected by some special substance.

Over-exercise, strong mental excitement, indulgence in rich and high-seasoned food, and intemperance in drinks, sometimes produce attacks of Nettle Rash. So also will exposure to sudden changes of heat and cold. The disease attacks all ages; but it is most common in infants, and in young persons of the sanguine temperament, and women are more liable to it than men, probably because their skin is more delicate.

Treatment.—In infants and young children the complaint may generally be got rid of by mild doses of Magnesia, or Magnesia and Rhubarb, repeated daily for two, three, or four days. When it is well known that any noxious substance has been taken into the stomach, a mild emetic of *Ipecacuanha*, administered before the laxative, will be beneficial. In grown persons, in chronic cases, particularly in those persons who are subject occasionally to returns of the complaint, I have found the most decided benefit from small doses of *Bi-carbonate of Soda*; say from five to ten grains, taken three times a day in a little water, or about a wine-glassful of Infusion of *Cascarilla Bark*. When persevered in sufficiently long, say for three or four weeks, I have not only never known it to fail, but I have known in some cases years to pass away without a return of the complaint. Warm bathing will sometimes be beneficial; and where the irritation and itching have been very distressing, I have known

sponging the body with Morphia dissolved in warm water (about a grain of Morphia to four ounces of water) to give great relief. A little smarting will be felt at first, but that soon subsides, and a feeling of comfort is the result. But, in order to cure the complaint, internal remedies are absolutely necessary.

RINGWORM.

This is an eruptive disease, which is found occasionally on the face, neck, arms or shoulders, but most frequently on the head. The disease usually occurs in circular patches which appears to increase in rings or circles, whence the name. The patch is composed of little vesicles, redder in colour than the natural skin. These vesicles usually break in about three or four days, and form little scabs, which dry up and fall off. The vesicles, however, are very apt to spread, and, if neglected at the commencement, may become very troublesome to eradicate. Ringworm is highly contagious; it is frequently propagated by children at school wearing each others' caps, or by using the same comb; also, sometimes, it may be transferred from one part to another of the same child from scratching or picking the original patch.

When the Ringworm is first discovered, the hair on and around the part should be clipped quite close with a pair of sharp scissors. The place should then be carefully washed with a little soap and warm water, on a piece of soft flannel; when dry, each little vesicle (or pimple) should be touched with a drop of Muriated Tincture of Iron, (*Tinct. Ferri Mur.*) on the point of a camel's hair brush, or the point of a small feather. This should be repeated every morning till the disease disappears. I have never known a case resist this mode of treatment. A cap should be worn constantly, so as to prevent any irritation to the part, and also to prevent the child rubbing or scratching it.

SCALD HEAD.

The eruption appears much more frequently on the scalp than elsewhere; but it occasionally appears also on other parts of the body, as the face, neck, limbs, &c., to which it is probably generally transferred either from the head by the nails of the patient, or from contact with some other person.

The disease shows itself first in the form of specks, of a yellow colour, like minute crusts, scarcely rising above the surface, and appearing as if set in the skin. There is usually little redness about them. They are scattered irregularly, without any particular arrangement, frequently permanently distinct, but sometimes so crowded as to cover portions of the surface completely. They are generally seated at the roots of the hairs, one of which passes through the centre of the crust. The eruption is attended with more or less itching. When the crusts are numerous, they often meet at the outer edges, so as to form a continuous incrustation of greater or less extent. Sometimes the whole scalp is covered, as by a closely fitting cap. If permitted to remain undisturbed, the crusts continue to adhere for months or years, but undergo a kind

of disintegration on the surface, exchanging their yellow for a whitish colour, becoming brittle, and breaking into small powdery fragments. The hair upon the diseased surface, in this advanced stage, generally falls; and, either none appears afterwards, or that which is produced is of an altered character, being downy and destitute of colour.

When want of cleanliness exists along with the disease, insects are often generated beneath the crusts, intense itching is excited, and the patient is unable to resist a propensity to scratch the parts, sometimes even violently, thus tearing off the scabs, causing bleeding and excoriated spots, and adding greatly to the inflammation. In this state of the scalp there is usually an extremely fetid odour. With proper cleanliness, and upon the removal of the scabs, the odour is less disagreeable but still nauseous.

The disease, when long established, is thought to retard the development of the system, and to have a debilitating effect upon the intellectual faculties. A tendency to scrofulous disease is also occasionally shown, and its development is favoured by the eruptive affection. The nails, in old cases, are said to be sometimes thickened, elongated and roughened, and to become of a yellow colour.

The duration of the complaint, if left to itself, is uncertain. It may continue for many years a source of much distress to the patient and of disgust to those about him; but it is seldom, if ever, directly fatal. When it ends favourably, under proper treatment, new crusts are no longer formed upon the removal of the old ones; pustules cease to show themselves, and the skin, though it may have been apparently disorganized, returns gradually to a healthy condition, with only some redness left, which ultimately disappears. The hair, however, is sometimes never reproduced, and when it does come forth, has usually for a long time an unnatural appearance. Still this is frequently restored in time, especially when an early cure has been effected.

The general health of the patient should be attended to, and if there should be any evidence of a scrofulous taint in the system, the remedies recommended in treating of that disease should be administered. But no remedy that is not directly applied to the part can have any influence in curing the disease.

Treatment.—The hair should be first removed from the part affected by cutting it close with a pair of sharp scissors. The scabs must then be removed by means of poultices of linseed meal, boiled and mashed carrots, or bread; (they should be applied warm and changed as often as they get at all cool) or by fomentations, and afterwards by frequent washing with soap and warm water. The flannel used for these purposes should not be used for any other purpose, as it would be sure to spread the infection. The scalp should generally be washed with soap and water every day or every second day, so that the applications may have a fair chance of reaching the diseased surface.

Many applications have been used for the cure of Scald Head. One of the first objects to be attained is the removal of the hair over the diseased surface. If the hair does not come away with the scabs after the poulticing, the following ointment may be applied: *Carbonate of*

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Soda, one dram, *fresh lard*, one ounce; this may be rubbed on the part with a bit of soft flannel for ten or fifteen minutes every day, till the hair comes away. After the hair is removed, a plaster of *Tar Ointment* should be applied and kept on continually. It should be removed every second day, and the old ointment carefully washed off with cold and warm water before the new plaster is applied. Should the *Tar Ointment* prove insufficient of itself to cure the disease, an equal quantity of *Sulphur Ointment* may be added to it. Lotions of *Sulphuric Potash*, *Chloride of Soda*, and *Chloride of Lime*, *Sulphate of Iron*, *Sulphate of Zinc*, and *Sulphate of Copper*, and various other preparations have been used. A linen cap should be constantly worn to protect the head as well from the atmosphere as from the fingers of the patient.

INCONTINENCE OF URINE.

Involuntary discharges of urine at night is a frequent and very disagreeable affection; it is most common in young children, and is apt to cease at or before puberty, but is occasionally prolonged to a later age. The discharge during sleep sometimes occurs in consequence of dreams, but more frequently is altogether involuntary, without the least consciousness on the part of the patient, and dependent solely upon the relaxation of the *sphincter* under the stimulus of the urine. Occasionally the incontinence is experienced also during the day, so that the patient cannot retain his urine as long as persons in ordinary health. This affection is often attended with an acrid condition of the urine, which is highly coloured, and loaded with *uric acid* in solution, or even with sediment of the acid or its salts. In this case there is a combination of irritation of bladder with debility of the *sphincter*. More frequently, however, the urine is pale and watery, and secreted in unusual quantity. The affection is said sometimes to be hereditary, or at least it occurs frequently in several members of the same family.

I have often found country people under the impression that their children became affected through playing with and handling the blossoms of *dandelion* (which is a powerful *diuretic*), the bright yellow flowers of which are usually very captivating to children. Very likely the handling and smelling the *dandelion*, and the sprawling about on the damp grass may together have some effect.

Treatment.—Our object, in these cases, must be to improve the health, and strengthen the general tone of the system. For this purpose, we may give the patient *tonics*, such as infusions of *Gentian*, *Cascarilla*, or *Colombo*, or all combined, with small doses of *Acetate* or *Sulphate of Iron*, with cold bathing. Friction over the body, with a rough towel, for ten minutes after the bath, will be beneficial, and attention should be paid to the diet, which should be nourishing and easy of digestion. Occasionally, benefit will be derived from taking one or two grains of *Extract of Henbane* (this dose for a child of ten years old) at bedtime, which may be repeated if found of advantage. The child should be allowed but little drink in the evening, and that not of an acid nature; and he should carefully and completely empty the bladder before going to sleep.

GREENSICKNESS (*Chlorosis*).

This is a complaint chiefly affecting girls, and occasionally young married women. The skin, lips, tongue and mucous surfaces generally are pale, and the whole surface of the body appears bloodless. Sometimes the face is yellowish, and has a waxen aspect. Sometimes the face looks swelled, the skin appears transparent, and the legs and feet swell. The patient is usually feeble, and cannot bear much exertion; the circulation is weak, and palpitation of the heart is a frequent symptom. The patient frequently complains of headache, dizziness and faintness, pains in the head and costiveness. The appetite is irregular, the breath offensive; the complexion gradually becomes of a yellowish or greenish hue, and dark circles frequently form around the eyes. The immediate causes of this disease are usually want of air and exercise, unwholesome or indigestible food, grief, disappointment in love, and mental anxieties of all kinds. Organic diseases of the stomach, bowels, liver, spleen and heart, sometimes predispose to the complaint, also miasmatic fevers, and chronic disease of the spleen.

Treatment.—Attention must be given to the cause of the complaint, and the proper remedies adopted. If the complaint arises from a disordered state of the stomach and bowels, the following pill will be of benefit:—

Socotrine Aloe.....	One Dram.
Powdered Gum Myrrh.....	Half a Dram.
Extract of Henbane.....	Half a Dram.
Oil of Cloves.....	Fifteen drops.

Mix and divide into 30 pills, two of which may be taken *every night*, or *every second night*.

If the system generally appears out of order, the following may be given with advantage:—

Steel Wine.....	One Ounce.
Tincture of Peruvian Bark.....	One Ounce.
Tincture of Gentian.....	One Ounce.
Tincture of Orange Peel.....	Half an Ounce.
Syrup.....	One Ounce.
Water.....	Two Ounces.

Mix together. A teaspoonful may be taken in a little water three times a day. Sponging from head to foot every morning when the weather is not too cold, and rubbing dry afterwards with a rather rough towel; plenty of air and exercise, and a good nourishing diet, will be of advantage.

Sir Henry Marsh recommends the following mode of taking iron:—

Sulphate of Iron, dried and powdered, from one to five grains.
Tartaric acid, ten grains.
Powdered White Sugar, half a dram.

This powder should be kept in a dry place. When it is to be taken, fifteen grains of Bi-carbonate of Soda is to be added, and the whole

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dissolved in a wineglassful of water, and taken while effervescing. He also adds:—"There are individual constitutions so intolerant of iron, so peculiarly affected by it, that we are compelled altogether to forego the administration of this useful remedy. Some patients cannot endure it, except in quantities insufficient to effect a cure. We are in consequence compelled to look about for a substitute, and the most efficient one is probably *Bismuth*. Under the use of this metal, gradual and satisfactory cures have resulted. *Carbonate of Ammonia* and the salts of *Peruvian Bark* are also of value."

ST. VITUS'S DANCE (*Chorea Sancti Viti*).

In this disease, there are involuntary muscular contractions without loss of consciousness, and without a complete loss of the power of the will. The contractions are somewhat peculiar, not being rigid like those of *Tetanus*, nor so quick and jerking as those of ordinary convulsions, but rather resembling voluntary movements, for which they may easily be mistaken. The name of the disease is said to have arisen from the custom, formerly prevalent, for those afflicted with the disease, to journey to the shrine of St. Vitus, near Ulm, in France, where they were supposed to be miraculously healed.

The complaint usually comes on gradually, and is often preceded by symptoms of derangement of the digestive organs, such as irregular appetite, constipation, swollen abdomen, &c., which are also sometimes accompanied by depression of spirits, and other signs of nervous disorder. The first unusual movements noticed are frequently in some particular part of the body, as the face, the shoulder, or the hands; the patient making ludicrous grimaces, or shrugging his shoulders, or incessantly working with the fingers, and perhaps incurring blame for behaving rudely, or acting absurdly, as if the motions were voluntary. But they are soon found to be beyond the control of the will. These irregular muscular actions increase, and at length the whole body becomes involved. Head, trunk, and extremities are in almost constant motion. The features undergo various whimsical distortions, as if the patient were making faces for the amusement of the spectators. The head is moved grotesquely upon the neck; the limbs appear to be twitched about, and the muscles of the trunk pull it first one way and then another, making the patient appear exceedingly fidgetty, without greatly altering his position.

If any voluntary movement is attempted, there is a curious and often ludicrous mixture of the regular and irregular actions of the muscles, which seem to be influenced by two opposite forces; but unless the disease be very violent, or the object aimed at requires some nicety or steadiness of movement, the will is generally successful in the end. Thus patients cannot use the hand in writing or sewing, but they can usually convey objects to the mouth, or move from one place to another, though in accomplishing the former object, the arm is jerked about in various opposite directions before it reaches the point aimed at, and in attempting the latter, the body often goes through numerous zig-zag

operations, advances with a sort of hitching gait, and as if one foot were dragged after the other, and the patient frequently falls.

The inner muscles of the mouth and fauces sometimes participate in the disturbed action; the tongue is rolled out occasionally between the lips; the patient stammers or hesitates in speaking, and sometimes even has a difficulty in swallowing.

In very bad cases, the patient loses the power of maintaining a standing or even a sitting posture, and is compelled to lie in bed. One side is sometimes much more affected than the other. Usually, these involuntary motions cease during sleep, but not always. It has been noticed that the patient is generally worse when conscious than others are noticing him.

St. Vitus's Dance is sometimes attended with headache; the bowels are generally confined, and the discharges often unhealthy. The appetite is changeable; there is no fever. It is a singular fact that there is much less sense of fatigue from the incessant muscular action than would result from an equal amount of exercise under the direction of the will. The temper is not unfrequently affected; it is more capricious, excitable, or apprehensive than in health. The patient often weeps without apparent cause, or is gloomy or apathetic. The disease is not unfrequently associated with *hysteria*, when it attacks females about or beyond the age of puberty. The mental disturbance sometimes amounts to delirium. Neuralgic affections are not uncommon in patients who have been labouring under *chorea*, and some authors have noticed a connexion between the latter complaint and rheumatism.

The course of the disease is not by any means regular. Under proper treatment, it may continue only a few days, or it may run on for months or years. There is reason to believe that when it commences young, a patient may eventually outgrow it, even without medical assistance, but it is thought, when long continued, to weaken the mental powers, and it is even accused of producing imbecility, epilepsy, and paralysis; but the probability is that these diseases, when they occur, are due to the same original cause as the *chorea*, and are not the results of the latter.

Chorea is sometimes confined to a single part, as the face, an arm, or a leg; and the patient, although well in other respects, is unable to prevent himself from making uncouth or ridiculous movements of this part, which subject him occasionally to inconvenience or mortification. This partial *chorea* is more difficult to cure than the general, and frequently continues during life.

An unsteady, excitable state of the system is supposed to predispose to *chorea*, but in many cases it has appeared suddenly in persons previously healthy. A predisposition to the disease is said to be sometimes inherited. No particular age is exempt from the disease, but it seldom attacks infants or old people; the most liable are these between the ages of six and fifteen. Females are more liable to the disease than males.

The exciting causes are strong and disturbing emotions, especially terror; excessive excitement of all kinds, whether mental or bodily, and consequent over-exertion of the faculties; various irritations, as those

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